



**MAGIC SQUARE**

# Marine Corps Gazette

OCTOBER 1954

NUMBER 10

VOLUME 38

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## COVER

That gun, mounted on the new tripod, is firing full blast. But before you hop on us for bypassing safety regulations, take a look at the cut on the left—it shows how the picture was taken. By pre-setting the camera on a tripod forward of the gun, MSgt Alvin S. Bender was able to trip the shutter by remote control—thus getting an autumn color transparency without giving the range safety officer apoplexy or a nervous breakdown.

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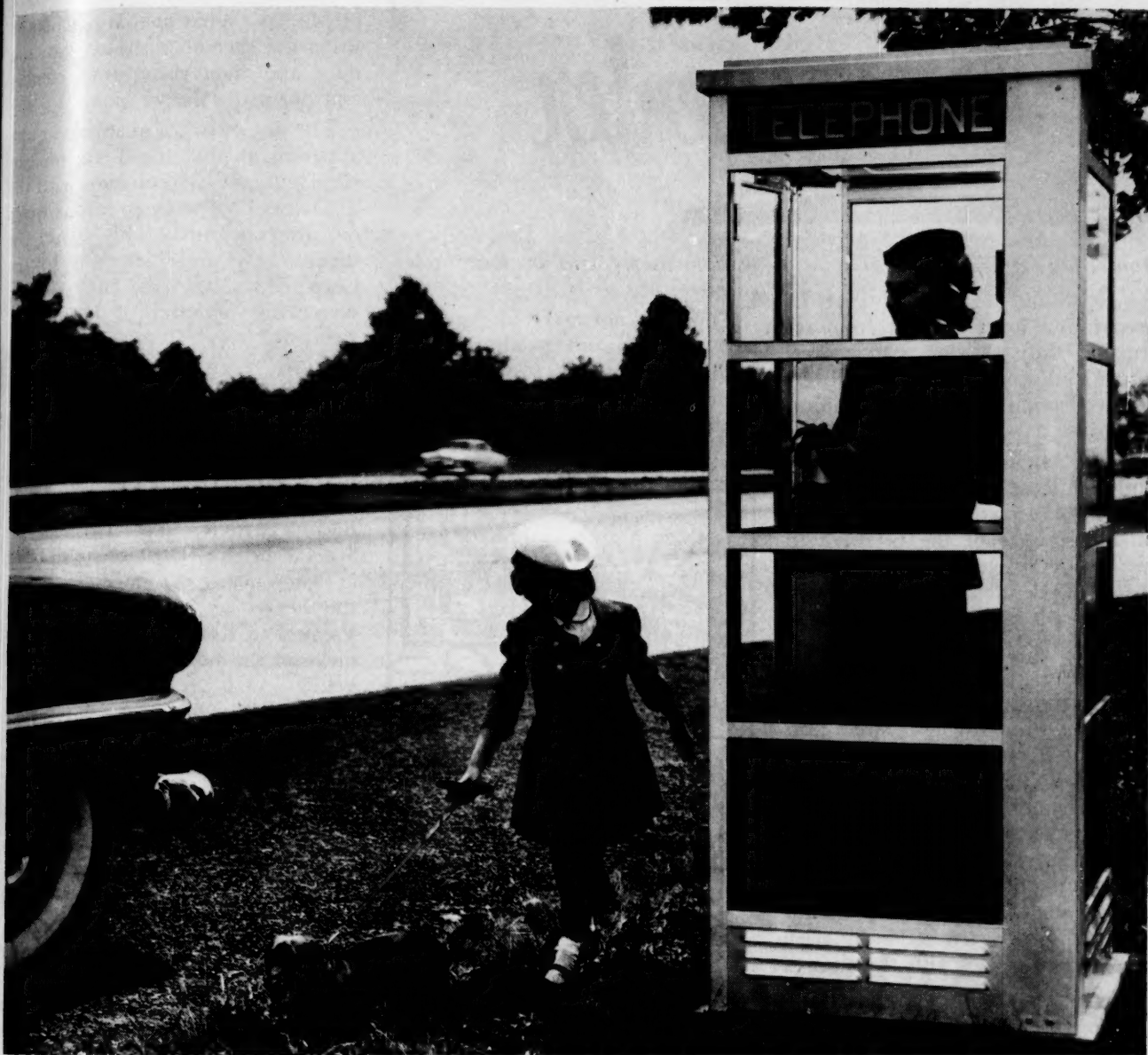
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# message center

## Don't Throw 'Em Away!

... While packing my gear in preparation for a transfer from recruiting duty, I am, with regret, forced to discard my complete three-year collection of your outstanding magazine.

I have on innumerable occasions, both while serving at a base and here in a recruiting billet, referred to a past issue of the *GAZETTE* to review an article or to compare a theory aired in the latest issue with those on the same subject published in the past.

Attempting to maintain a personal magazine collection (even the *GAZETTE*), while living aboard a post or station is rather impracticable for unmarried personnel like myself. (I understand there are still a few other single Staff NCOs left in the Marine Corps also.) In the interest of training, it is my opinion that every issue of the *GAZETTE* should be kept filed by each and every office required to possess and maintain a Marine Corps Manual. This file to be made available to the officers and NCOs desiring to review it.

May I further suggest that the Marine Corps *GAZETTE* be made required reading for all Staff NCOs in the Corps. The amount of time required to read each issue can hardly compensate for the wealth of information derived from it.

KARL W. JENKINS  
TSgt, USMC

St. Cloud, Minn.

ED: See inside back cover this issue.

## Which One?

... Everyone is trying to get in the act! — *The Guide Book for Marines*, *LPM* and *FM 22-5*, plus various Marine Corps Schools pamphlets. This would not be too bad except they do not agree on all subjects covered. Clothing layouts, drill, first aid, sanitation and hygiene, signs and symbols for maps, etc. (Have you tried to display clothing and

equipment by two or more references?)

This does not make for standardized training and produces much conflicting interpretation, depending on the organization you are in at the moment.



Picture the *Guide Book* recruit on reaching his new duty station, finding out all the chapters he has memorized out of his "red bible" are not applicable.

We should start off our training with references a Marine can expect to find S.O.P. at his next duty station. After all, time, manpower, money and much sweat go into learning information which cannot be counted on as right in the next inspection of "Junk on the Bunk," promotion tests, etc.

Let's have a uniformity of training not a retraining phase every time a Marine is transferred. One "bible" is enough for basic subjects.

IRVIN R. STONE  
TSgt, USMC

San Diego, Calif.

## Economy in Weapons

... We all know that the Marine Corps attempts to economize. ... The Commandant has gone to the extent of publishing directives ordering supply economy wherever possible.

Marine Corps General Order No. 151 states that Staff Non-commissioned Officers will fire as their T/O weapon, the carbine caliber .30 M1

or M2. ... What goal is reached by firing the carbine while on garrison duty and then going into combat and not using the weapon?

The simple solution appears quite apparent, in that the T/Os for garrison duty should coincide with the T/Os for FMF duty so far as weapons are concerned. This would not involve any great expense to the Corps, but rather, in my opinion, save many thousands of dollars.

G. T. PORTAL  
MSgt, USMC

San Diego, Calif.

## How Soon?

... I believe, after reading LtCol Bacon's article *New Targets*, the Special Devices Center Field Office at San Diego will be endeared in the hearts of Battalion S-3s from Vieques to Korea for their development of the new combat range target.

As a recent S-3 of the 3d Bn, 2d Marines, I have seen training efficiency lowered in accelerated training periods (TRAEXS) because of lack of such a target. I wholeheartedly agree that the cost will be more than compensated by the dividends received by way of the increased troop interest, motivation, ammunition savings and higher unit combat efficiency! My only other remark than "well done" is—How soon can they be issued to the field?

E. L. LEWIS  
Maj, USMC

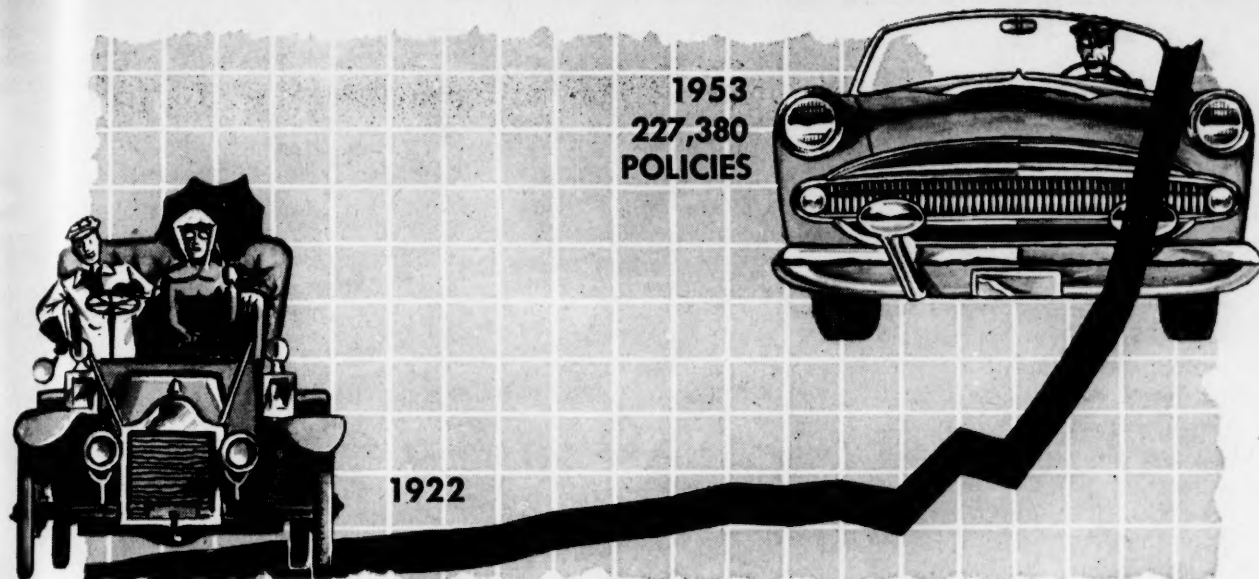
Memphis, Tenn.

## To Clear the Beach

... Another well done for Colonel Croizat. His article *Pound for Pound — More Punch* expresses the sentiments of many officers and men in the Marine Corps today. Not only would his concept reduce the weight and cube of the present Reinforced Marine Division, but the LVTH as self propelled artillery in conjunction with the LVTP as personnel carriers, will give the Marine division far greater speed and mobility in clearing the landing beaches, which is a must in this atomic age.

F. I. FENTON, JR.  
Major, USMC

Argentia, Newfoundland



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Factory Price	Cost	Purchase Date	New/Used	Current Year	Car License State	Name in which car legally registered	

Is the automobile customarily used in the occupational duties of any person except in going to and from the principal place of occupation?

Is the automobile customarily used in driving to or from work?

If the automobile is customarily used in driving to or from work, how many road miles is the car driven one way?

How many operators under age 25? \_\_\_\_\_

Age of each: \_\_\_\_\_

Are any of the operators under 25 owners or principal operators of the automobile?

If any of the operators under 25 are owners, or principal operators, of the automobile,

(a) are all such operators married? \_\_\_\_\_

(b) do all such operators have legal custody of a child resident in the household? \_\_\_\_\_

Name & Rank \_\_\_\_\_

Military Address \_\_\_\_\_

If car not at above address, give location of car. \_\_\_\_\_



## New Pay Grades

... After reading several articles recommending additional incentives designed to help retain qualified personnel in the service, I have an idea that I would like to submit for discussion.

Under the present enlisted promotion system when a man makes master sergeant he has just about "had it." Usually they are too old for a permanent commission or they lack the formal educational requirements to be eligible.

Why not a pay bill creating new master sergeant pay grades of E-8,

E-9, and E-10? After spending five years as an E-7, a master sergeant would be considered for selection to pay grade E-8. The selection to be conducted in the same manner as selection for promotion is at present. After five years as an E-8, he would be considered for selection to pay grade E-9 and so on until he reaches pay grade E-10.

Such a bill, I believe, would encourage senior enlisted grades to stay in the service and would also give master sergeants a much better chance for advancement. Also those master sergeants who are inclined

to "let-up" or "rest on their laurels," would have to start producing or be left by the wayside.

DAN R. HUGHINS  
MSgt, USMC

San Diego, Calif.



## On Shirts and Uniforms

... A plea for our old (how long now?) shirts, summer service — collars, that is.

After a number of wearings with the "new" emblems, collar, clutch type, without jacket or coat, you make the mistake of wearing that same shirt with the jacket or coat (and naturally without those ornaments, collar, clutch type) — lo and behold — you are sharp, fresh pressed, but look at that shirt collar. It looks like something picked out of a rag bag — the prongs, naturally, defaced it. ... Please either do away with the collar clutch type ornaments (my solution) or:

1. Make a more substantial shirt, or make permanent small openings in these current cheaply made khaki shirts and just wear them all the time with or without coats.

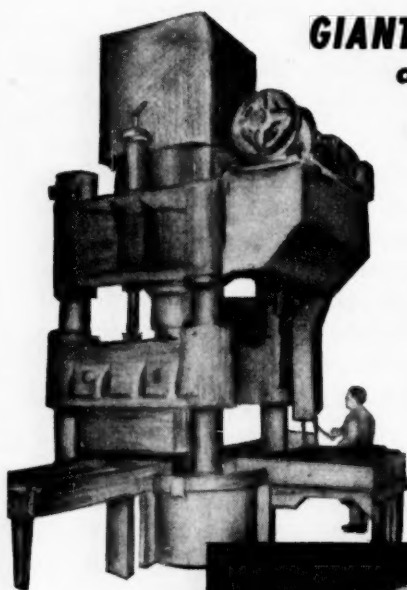
2. Do away with those "army influence era" collar emblems.

H. J. JAMES  
SSgt, USMC

USS Midway (CVA-41)

... "Amen" to SSgt Hugh W. Davis' recent comments regarding the utility "uniform." I would further suggest that we use the metal emblems on the cap as well as the collar and remove all *printed* emblems and the "USMC" from the shirt. Then local natives, indigenous service troops and civilian workers who happen to acquire items of utility clothing would not be wearing parts of a Marine uniform. The emblems make it a uniform.

Also, let's starch and press utilities whenever possible and hold



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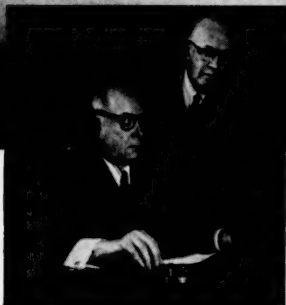
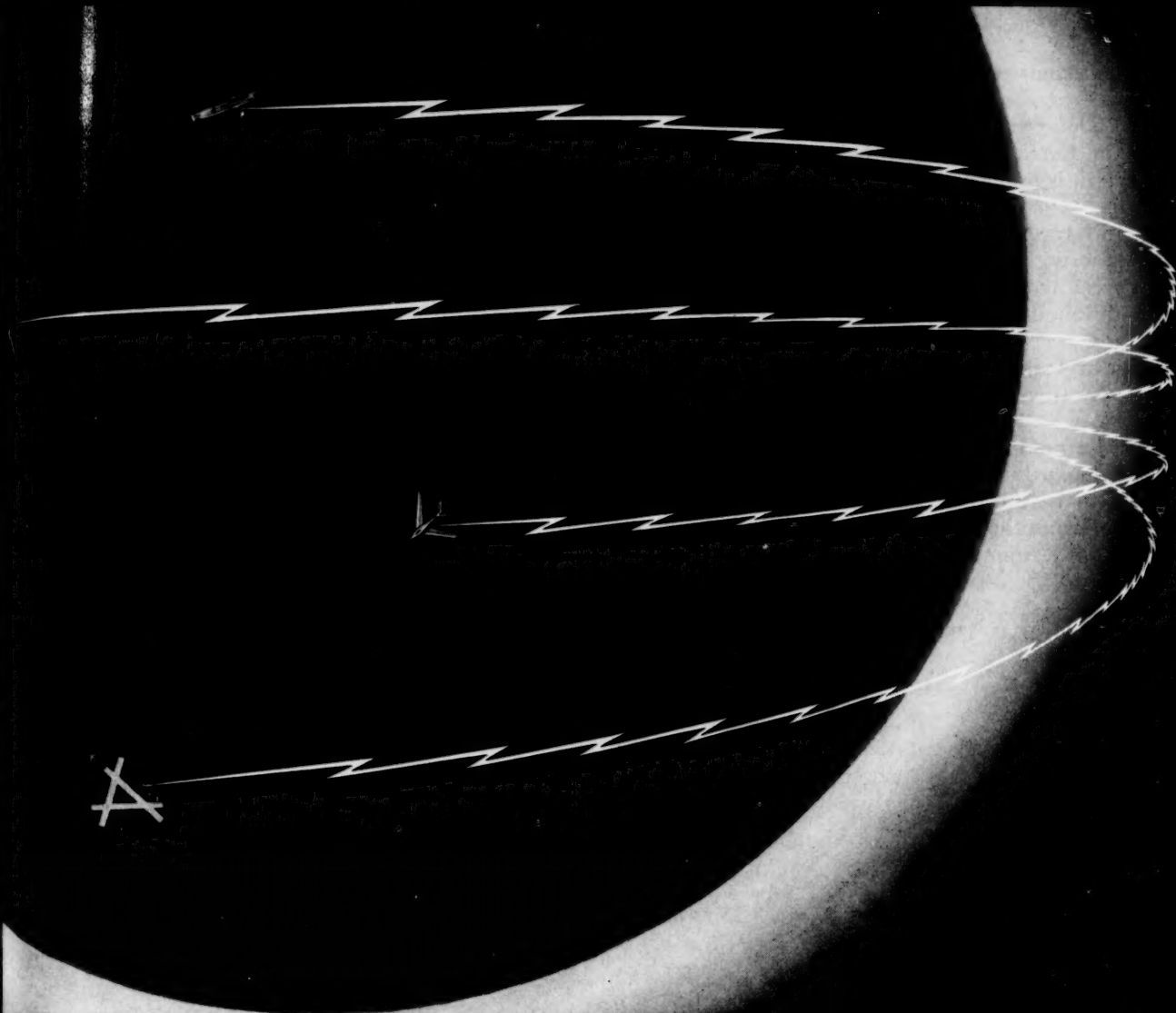
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## Tapping out the message heard 'round the world

On November 18, 1953, at Jim Creek, state of Washington, the world's most powerful transmitter went on the air. Admiral Robert B. Carney, Chief of Naval Operations, dictated a message to all U. S. Naval units. Brigadier General David Sarnoff, Chairman of the Board of RCA, operated the key. A new era—of instant communication to any point in the world—had opened up.

"Big Jim," as the transmitter is called, uses a giant antenna which stretches

between 3,000-foot mountains. Its 1,200,000-watt output is 22 times more powerful than the biggest commercial radio station in the world.

That's how "Big Jim's" messages get through the worst magnetic storm conditions to reach units in the air, on land, on sea—and *submarines below the surface*—anywhere in the world!

For six years RCA has been working closely with the Navy on the design and engineering of "Big Jim." These same

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GOVERNMENT DEPARTMENT  
**RADIO CORPORATION of AMERICA**  
ENGINEERING PRODUCTS DIVISION  
CAMDEN, N.J.

trouser bottoms with elastic for a neat blouse over boot tops.

Polish boots whenever possible. If units in Korea can polish their boots, certainly units in the States can.

The Uniform Board should check on the tailoring of the new utility shirt. I recently purchased a size 42 shirt and found it had a 19-inch collar!

The utility cap as worn by most Marines is still not very military looking.

Many Marines spend most of their time wearing utility clothes, yet it continues to be the one "uniform" worn by Marines that generally presents a sloppy, unmilitary appearance.

J. A. DONOVAN, JR.  
LtCol, USMC

Quantico, Va.

### **Eureka!**

... Subject is "a military mistake" in the August issue of the GAZETTE.

It appears that either the rear rank of the platoon preceding the color guard is out of step or the color guard itself has lost the beat. See page 43.

M. L. THOMPSEN  
LtCol, USMC

Fort Bragg, N. C.

... Could it possibly be the color guard ... in your August 1954 issue being out of step with the group in front of them? Or, could it be the same color guard *not* doing "Eyes Right" according to paragraph 2-18 h. (3), *Landing Party Manual*?

HENRY J. GAMACHE  
TSgt, USMC

Camp Lejeune, N. C.

Ed: *Both of you were right.*

The reviewing officer is entitled to the honor and the regimental color has saluted, but the color guard has not executed eyes right.

JOHN HENDERSON  
Santa Monica, Calif.

... Challenge accepted. I found two military errors in your August issue. On the cover, the bull's-eye disc should be white, not the pink as shown. But the most glaring error appears on page 43 where we find the colors out of step with the troops. I imagine the reviewing offi-

cer was doing a slow burn at this instance in the review.

CHARLES S. SMITH,  
Capt, USMC

Guantanamo Bay, Cuba

Ed: *The cover layout, as it originally left the GAZETTE office, was technically correct. However, after running off 65,000 covers the printer discovered he had run the job with the red disc on top and the white disc second. In correcting the error, the white overprint failed to completely cover the red in some cases—hence the pink disc.*

### **Eureka II**

... After looking over the entire issue, I noted that on page 60, under the heading *Passing in Review*, a drawing of a rocket was presented. This rocket has V-2 on its nose. This is in error since the V-2 rocket is not powered with a pulse-jet engine. The issue's illustration is that of the once short lived Nazi V-1 Buzz Bomb. Am I not correct?

ROBERT A. LANG  
SSgt, USMC

Philadelphia, Pa.

Ed: *This one we hadn't bargained for. It was a V-1.*

### **Blast**

... What in heaven's name ever possessed the Editorial Board to accept and print anything as dull, unenlightening and uninteresting as *I'd Had It*, in your July issue. Certainly any of us who had the misfortune to have to act as censors during WW II can sympathize with LtCol Hoffman, but wherein does any interest in his tribulations lie for even a small percentage of the loyal readers? Is the till so full or the paper so plentiful that the GAZETTE will pay for anything regardless of content? If this be true then little time will pass before our No. 1 magazine will truly have "had it."

BILLY C. MARKS,  
Capt, USMC

3d Mar Div

### **In This Corner**

... Your September *Message Center* published a letter written by Maj Edson W. Card, regarding Col Prickett's *Economy in Writing*.

During the past 14 years I have heard a million words about reduc-

ing official "gobbledegoop." Col Prickett's piece is the first sensible remedy I have seen in writing.

... Although I don't have a B.S., B.A., B.E., LL.B., Ph.D. (or B.V.D.), I found *Economy in Writing* readable, reasonable and understandable, "Fog Count" notwithstanding!

FRANK E. COPELAND  
1stLt, USMC

Quantico, Va.



### **Variety etc. . . .**

... I'm in favor of shortening the sea duty tour to 15 or 18 months for personnel on their first enlistment. In most cases, a three year enlistment man is rushed through boot camp, rushed through Sea School, and then right aboard ship. When his two years of sea duty are up, he is sent to some post or station to serve out his enlistment, which is to expire shortly. That's as much of the Corps as he sees and naturally he plans to get out.

True, he has an infantry MOS and has had limited training while aboard ship, but he is lacking in knowledge of Marine Corps infantry and the role he would play in an infantry unit.

Why not shorten the tour, give each man a year in the FMF to round out his enlistment, and I'm sure we'll have many good men ship over who would not otherwise. Records will show, I'm sure, that sea duty first enlistment Pfc's and Corporals just aren't in the "shipping over" mood. By shortening the tour, we may help to correct the situation.

WILLIAM N. JACKSON  
Capt, USMC  
USS Worcester (CL-144)

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### **1927 vs 1937**

... You outdid yourself when you moved 10 years ahead and advised us to break out our 1937 *Landing Force Manual* to learn Squads Right! It is the 1927 *Landing Force Manual* that will govern drill of non-FMF units and bring them back to the fine old days of complex drill.

DENNIS D. NICHOLSON, JR.  
Major, USMC

Quantico, Va.

... In the August issue it mentioned breaking out the 1937 LFM. So far, every order published about the drill refers to the LFM 1927 (i.e., around MCS).

WILLIE L. LOWE, JR.  
2dLt, USMC

Quantico, Va.

... Have just received my August copy of the *GAZETTE* and read your article *Squads Right*. Your article starts out with "Break out that old 1937 copy of the *Landing Force Manual*," while the directive from Headquarters, U. S. Marine Corps, refers to the "*Landing Force Manual* of 1927."



Having had considerable experience with the old drill, I was amazed that Headquarters referenced the LFM of 1927, as the LFM of 1937 was a modern revision much better written and illustrated and containing several changes. One of the changes that comes to mind quickly is the difference in right (left) by squads. The 1927 Manual has the right (left) squad taking four (4) full steps to the front and then eight (8) half steps, while the 1937 Manual has been changed so that the right (left) squad takes seven (7) full steps to the front and then eight (8) half steps. The reason for this change was to keep the squads to the left or right from bunching up behind the squad in front when they executed their left turn.

Another discrepancy is the diagram showing the different formations of a company and the distance between elements in the formation. It is not clear in the 1927 edition but is very clearly illustrated in the 1937 edition.

The above mentioned items are small but why should we go back and learn something that was corrected later on by experience?

C. E. MCPARTLIN, JR.  
Maj, USMC

Quantico, Va.

ED: HQMC advises that the 1927 LFM was used as reference because more of them are available. However, in the near future, instructions promulgated on the old drill will be brought up to date and changed to conform with drill directions contained in the 1937 LFM.

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## How About It?

... Since it is practically impossible, both in time and finances, for Marines to follow all service magazines, could not the GAZETTE devote one page each month to briefs of articles which, in the editors' opinions, are of general interest?

T. I. GUNNING  
Capt, USMC

Quantico, Va.

... Captain Forde has (Sept '54 GAZETTE) suggestions for improving the methods of proficiency markings. He has obviously given much time and thought to this problem in an effort to raise the status of such marks. The same problem applies to fitness reports. I cite the many revisions in format and covering instructions issued in recent years. Every revision has succeeded, I believe, in improving the status as would Captain Forde's suggestions if adopted.

The heart of the problem, it seems to me, remains with the individual giving the marks. Regardless of how many methods of computing these are arrived at, until we can convince every person charged with this responsibility that this is not just an unpleasant chore to be done as quickly as possible and sparing the feelings of the borderlines or misfits, but a serious responsibility requiring considerable time and thought, these marks and fitness reports will continue to be only truly representative in those few cases where individuals of real integrity have sincerely given the markings.

R. G. DEMAREE  
Capt, USMC

Quantico, Va.

## Impossible!

... Pretty easy to agree with the objective of Major Bruce J. Matheson and his *Round the Clock Close Air Support*, but there is one problem bigger than both of us and one which was conveniently omitted from his article. It is not a matter of "dig in and learn it" and the article is snarled and meaningless due to one factor—we can't work night and day.

It takes six men to put one man on the battle field of Europe not including the continental United States. It would be superfluous to

even try to list the problems either in the States or abroad. Where is one to find this Utopia of manpower?

W. D. PATTERSON, JR.  
LtCol, USMC

Quantico, Va.

ED: *Nothing is impossible.*

## LETTER WRITERS

Please keep your *Message Center* contributions limited to 200 words or less. If you want to write an article on the subject, we'll be glad to consider it for publication.

## Proposal

... Col George C. Reinhardt, USA, in his article *Put Tac Air in Navy Blue* (September, 1954) *Army Combat Forces Journal*, makes and justifies the revolutionary proposal that Navy and Marine air should be made responsible for all surface (tactical) support over sea and land, while the Air Force's task would be solely strategic air and air defense of the U. S. Well, why not? Certainly problems of expansion for Navy/Marine air would arise, for one, but at least we would have a nucleus of trained instructors.

This letter, then, is to suggest that one or more qualified authors investigate and submit pro (or con) articles to the GAZETTE about the proposal. If majority opinion favors such a change, then tac-air enthusiasts should start building up support to make it so.

WARREN I. PAUL  
Sgt, USMCR

Asbury Park, N. J.

## Rebuttal

... Permit me to answer 2dLt Terry's letter (*No "Soft Touch"* September issue) which in itself was answering SSgt Clingman's suggestion on Boot Leave (July issue).

You are way off base, Lieutenant, way off base.

To begin with, you completely missed the point of Sergeant Clingman's letter. He did not advocate "softer" training at all. His only suggestion, and it was a darn good one, was to make it a policy to give all Boot Camp graduates an additional period of training or duty prior to Boot Leave.

At present, I am Officer in charge of Recruiting Station, Pittsburgh, Pennsylvania and feel well qualified to augment Sergeant Clingman's letter.

Only those of us connected with recruiting can evaluate the adverse effects that actually develop when a Marine on leave direct from Boot Camp spreads tales founded on a highly imaginative mind and a thorough dislike of the Marine Corps based solely on Boot Camp life. Believe me, Lieutenant, those people hurt the Marine Corps, perhaps in a minor way, but still they hurt us.

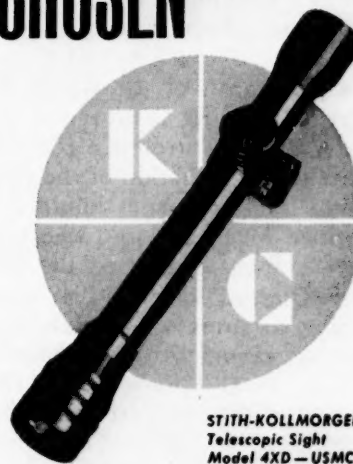
Let me point out one last fact. Marines are made, not born. Very few recruits procured have an "ardent desire" to be a Marine. We sell them the Marine Corps through pure salesmanship. You at Boot Camp deliver the product.

In closing, I must emphasize the fact that not all good Marines with a strong belief in tough training are on duty at Parris Island.

H. S. AITKEN  
Capt, USMC

Pittsburgh, Pa.

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# our authors

✿ **Major Julian T. Paget** takes as the subject of his article the tall men in the bearskin caps, scarlet tunics and white belts who guard Buckingham Palace and St. James Place—the British “corps d’elite”—*The Guards*. Major Paget has been a member of the Guards himself since 1940. Duty in the Coldstream Guards Regiment has taken him to France and Germany (WWII), to Palestine (1945-48). Later he came to the U.S., where he was



MAJ PAGET

with the British Joint Services Mission in Washington until June, 1954. Major Paget was graduated from Radley College in 1939 and received his MA in modern languages at Oxford University in 1940. Currently, the Major is in the center of the pomp as a ceremonial Guards Company Commander in London.

✿ An alumnus of the GAZETTE, former Managing Editor **Major Edwin A. Simmons** wrote his concept of what the organization of the rifle battalion and company should be. It is titled *Magic Square* (page 12). Major Simmons completed the 9th Reserve Officers' Course in 1942 after resigning an Army commission. He stayed on at Quantico as a platoon leader and instructor at Candidates' Class until 1943. After leaving the States, he joined the 5th Field Depot and later made the Guam landing with the 1st Prov Brig. The Major was the Public



MAJ SIMMONS

Information Officer of III Phib Corps in 1945 and was Managing Editor of the GAZETTE from 1946-49. In 1950 he made the landing at Inchon with the 1st Marines. He

was CO of a weapons company and Supporting Arms Coordinator until 1951 when he became a Bn S-3. A graduate of Lehigh University (class of '42), he is currently doing graduate work in Journalism and Sociology at Ohio State University where he is assigned as an Officer Instructor.

✿ *The Industrial College of the Armed Forces* and its functions are thoroughly explained by **Captain Charles M. Boundy, SC, USN**, Executive Officer of the school. Captain Boundy received both his AB and MA degrees from the University of Washington, and was commissioned a Lt(jg), USNR. Called to active duty, he was assigned as an instructor at USNA, Annapolis. He



CAPT BOUNDY

was a supply officer: aboard the USS *Almaack* ('41-42), at MCAS Mojave ('42-44), Pearl Harbor ('44-45) and at the end of the war was aboard the USS *Enterprise*. Supply and fiscal officer duties took up the Captain's time until, in 1952, he was assigned to the Industrial College as a student. After completing the course, he was retained as the Executive Officer and is still serving in that capacity.

✿ Former Special Weapons instructor at Basic School, **Captain Richard W. Smith's** article deals with *Nobody's Favorite Weapon*—the land mine. He was graduated from the Naval Academy in 1951. The Captain served with the 5th Marines in Korea until being assigned to the instructor billet at Quantico. He is currently serving with Hq Bn, Headquarters Marine Corps.

✿ Probably even Samuel Colt could not be more qualified to write an article on weapons than **Roger Marsh** who: was with Army Ordnance from 1942 to 1944; is the columnist of the feature *Weapons: Past and Present* as well as a military editor of the *Cleveland Plain Dealer*; is a free-lance technical arms author and illustrator and, last but not least, is the President of Weap-

ons, Inc., an arms technical experimental-design and publishing firm. His *Intermediate Automatics*, a family tree account of the semi-automatic shoulder weapon, is on page 40. He would like very much to see the U. S. lead the way in the development of a capable and effective semi-automatic. His article *Know Their Weapons* appeared in the August 1953 GAZETTE.

✿ A “ground-stomper” probably won't know what **Major George Hanna** means by *A Clean Dish for a Fast Wallop* (page 20), but any “fly-boy” will tell you that he means a



MAJ HANNA

plane with clean lines (no extra gear) capable of delivering a hard, fast punch at the enemy. The Burma-born Major came into the Corps through NAVCAD (V-5) in 1942. Commissioned later the same year, he was first assigned as a primary flight instructor at NAS Glenview, Ill., until 1944. Until discharged in 1946 he flew combat missions over Peleliu and Okinawa. After being recalled in 1950 the Major decided to stay. He is currently serving as CO, Headquarters Squadron, MCAS, Quantico.

✿ After pulling four tours of duty at MCS, Quantico, **LtCol Robert W. Glickert** has written on *Quantico's Other Schools*, a follow-up on last month's article on the development of MCS. The Colonel's first tour at Quantico was as a member of the 1st Candidates' Class in 1940. Since then he has been in the 4th Reserve Officers' Course (1941), Field Artillery School staff (1943-45) and with the Training and Education Unit from 1951 until



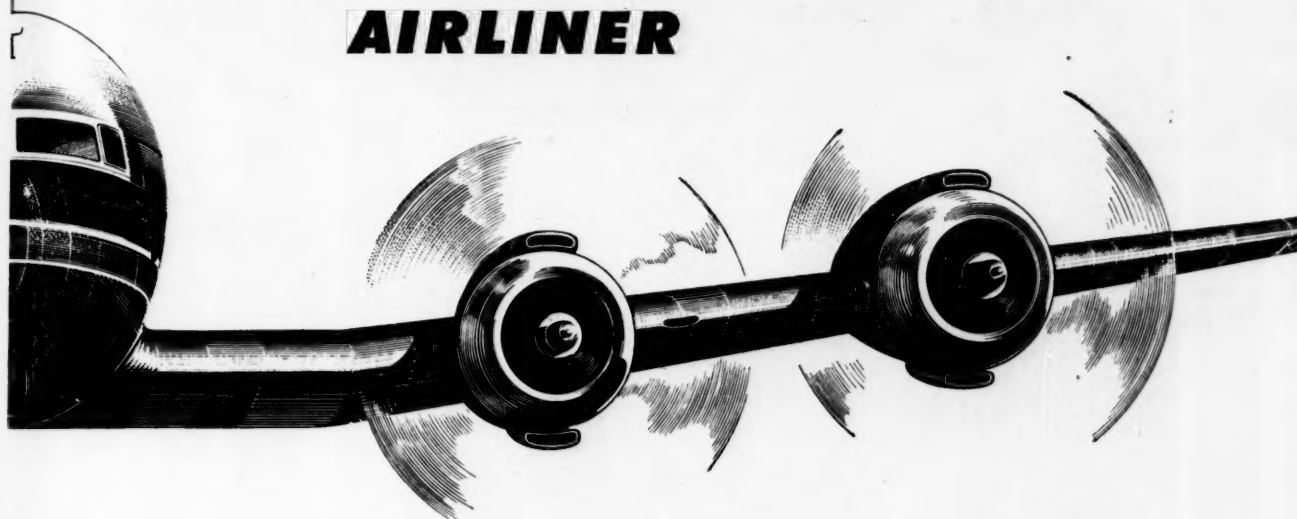
LTCOL GLICKERT

1954. The Colonel is presently serving with the 3d MarDiv. The Directors of the schools covered in the article assisted in the final editing to insure accuracy of presentation.



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A fighting formation shouldn't be just something that "diagrams well on the blackboard"



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# MAGIC SQUARE

By Major E. A. Simmons

POST MORTEM ANALYSES OF World War II amphibious actions and the events of the past three years in Korea have revealed several serious cracks in the doctrinal facade of Marine ground unit organization and tactics. The hitherto inviolate trinity of the triangular organization, with its creed of "two up and one back," has been challenged and found somewhat wanting. An organization based on the square rather than the triangle has

attracted many adherents. Argued in Korean command posts, stateside officers' messes and aired in a series of pro and con articles and letters in the GAZETTE, the square is now getting a further testing by certain FMF units.

As a result, a geometric progression of boxes may well replace the present, equally orderly, system of ever-increasing triangles. Before this is done it might be well for someone to demonstrate—or at least

suggest—that there is no more magic in the square than there is in the triangle; that there may well be a use for both; and that our approach to originating a table of organization should not necessarily be a search for something that diagrams nicely on a blackboard.

First, we should all be in agreement that the infantry battalion is the basic tactical unit. This is true both by field manual definition and in fact. Historically (and as a mat-

ter of military semantics), "battalion" has been synonymous with battle array or fighting formation, as opposed to "regiment" which has often had administrative connotations.

There are other significant considerations. The battalion is the smallest unit employing a staff. It is also the smallest infantry unit capable of reasonably sustained independent action without elaborate reinforcement. In the form of the "battalion landing team," the Marine infantry battalion has special

speaking, American tactical formations have been traditionally larger than the equivalent echelons in most foreign services. The Marine battalion has developed the massed punch needed to carry it over the beaches, but in becoming a tactical sledgehammer it has lost much of the mobility and flexibility it once had.

Of all the echelons within the Marine division, the infantry battalion would seem to be the one which would benefit most from a rectangular organization. We may,

self-sufficient, flexible battalion. Our potential enemies are continental rather than oceanic powers. We can expect future amphibious operations to be projected against land masses rather than islands. If, for no other reason than the advent of nuclear weapons, dispersion of units is mandatory and the high battlefield density of the Pacific War is a thing of the past.

Certainly the square offers greater self-sufficiency and all-around security than does the triangle. But how to add a fourth rifle company (which, of course, is what we mean by "rectangular" organization) without increasing the size of the already swollen battalion?

The logical point to begin the reorganization would seem to be the rifle platoon. Here the writer feels somewhat like the child in the tale of *The Emperors Clothes*. Certainly a great number of people must have observed that our rifle platoons and rifle companies are too large for really efficient control, but no one seems to have wanted to admit it.

Our Marine rifle platoon, as all the military world knows, is a tough and rugged outfit. It is also big. It becomes bigger when it gets its usual assortment of attachments—machine guns, rocket launchers, flame-throwers and mortars—depending perhaps, as the book says, "on the situation," but more likely upon the pattern of attachments established more or less rigidly by the company commander. When the young Marine second lieutenant platoon commander goes forth to do battle, he is usually at the head of a multi-armed aggregation numbering upwards of a hundred men—not only a terrific responsibility for one officer, but also a tremendous problem in tactical control.

How can the size of the platoon be efficiently reduced? A rifle platoon attacks by a combination of fire and maneuver. The technique involved is essentially the coordination of the base of fire with the maneuver element. A rifle platoon defends ordinarily with its squads abreast. It organizes its position in some depth, but seldom does it hold out a distinguishable support.

In neither the attack nor defense does there seem to be any real tactical need for a third, or support ele-



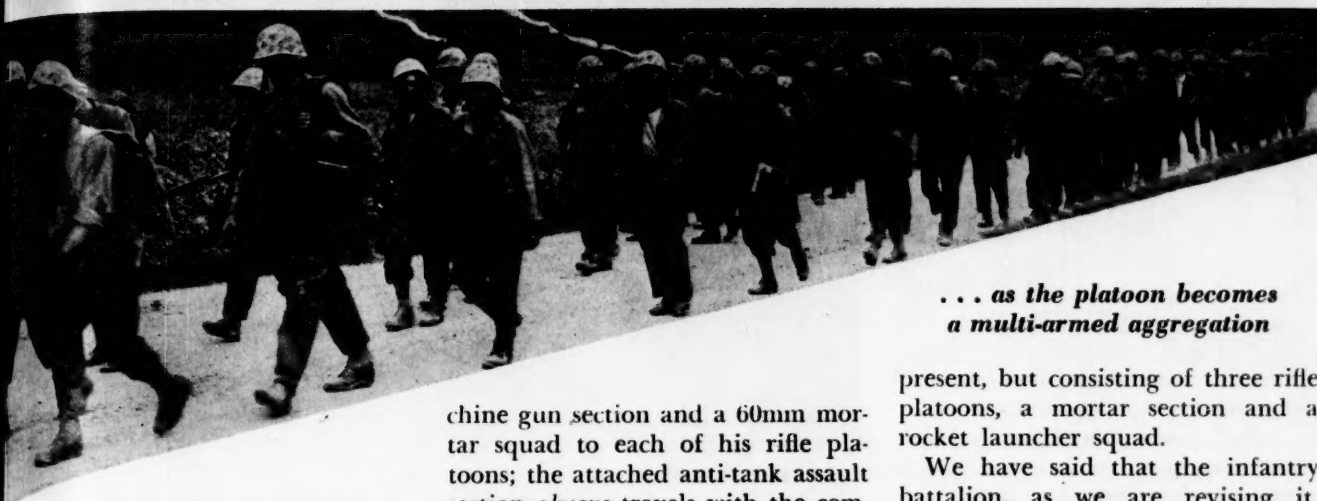
*For one officer, a tremendous problem of control . . .*

amphibious significance. We measure the extent of our landing areas in terms of battalion beaches. We gauge the impact of our landings in numbers of assault battalions.

Our Marine battalion is a husky organization and it has grown huskier as the years have passed. The present battalion is a good third larger than that which entered World War II. Generally

or may not, believe that Korea has set the pattern for future operations. In Korea during the first year, infantry battalions fighting on a wide front, both in the attack and defense, often found themselves far beyond supporting distance of their parent regiments or sister battalions. But even if Korea is rejected as a model, other obvious considerations dictate the need for a more





... as the platoon becomes  
a multi-armed aggregation

ment, within the rifle platoon. Let us, therefore, eliminate the third rifle squad. Also, since a platoon base of fire (almost always built around a section of light machine guns) is almost always essential to the platoon's attack, let us add a LMG squad to the platoon. This gives us a rifle platoon consisting of two rifle squads and a LMG squad—smaller, more compact, more easily controlled by its platoon commander, and yielding more combat power in terms of personnel involved.

Now to fit this revamped rifle platoon into its parent rifle company.

Consider for a moment, the responsibilities of the rifle company commander during combat. As normally reinforced for a landing or offensive, his company often numbers more than 300 men. In addition to the maneuver of his rifle platoons, he must concern himself with the employment of a galaxy of organic and attached crew-served weapons. He has light and heavy machine guns, light and medium mortars, flamethrowers, rocket launchers, recoilless rifles—as well as the use of his various external supporting arms—heavy mortars, tanks, artillery, naval gunfire and air. He must control all of this without benefit of a staff. What the industrial management people would call his "span of control" is stretched to the breaking point. He cannot give all these elements his individual attention. As a consequence, he tends to evolve a pattern of employment which seems to meet most of the possible situations most of the time. For instance, in the attack, he *always* attaches a light ma-

chine gun section and a 60mm mortar squad to each of his rifle platoons; the attached anti-tank assault section *always* travels with the company command group; the company itself *always* advances with two rifle platoons forward and one in support. These combinations, which the company commander works out, tend to become more and more rigid as time goes by and his company grows less and less flexible in its tactics.

Perhaps if the diversity of the company commander's responsibilities could be lessened, we could expect him to show greater imagination in the use of his unit. We can at least lighten his load to the extent of stripping his basic company down to its essentials.

Should the rifle company be triangular or rectangular in organization? The answer depends upon the degree of tactical self-sufficiency we expect of the company. Normally, we would expect very little self-sufficiency of a company without elaborate reinforcement. The triangular organization, therefore, seems well-adapted to the basic rifle company. If the company must operate semi-independently, then it can be temporarily strengthened by the addition of an operationally attached fourth rifle platoon.

As for other changes in the present rifle company, we would take away the light machine gun platoon entirely. (The platoon will reappear in a new formation: the machine gun company.) We will not disturb the 60mm mortar section and company rocket squad for the present—although there are valid arguments in favor of pulling the mortars and putting them into a mortar company.

We emerge, then, with a rifle company considerably smaller than at

present, but consisting of three rifle platoons, a mortar section and a rocket launcher squad.

We have said that the infantry battalion, as we are revising it, would have a basic structure of four rifle companies. Where, then, do we get the personnel for the fourth rifle company? Why, from the persons gained in stripping down the present rifle companies. Isn't this a case of robbing Peter to pay Paul? Definitely not. Fire power, flexibility, mobility and ease of control would all be materially increased. With smaller units and fewer men to handle, our captains and lieutenants can be expected to function more efficiently. Won't this require a higher ratio of officers? Obviously yes—more officers where the fighting is being done, but these might be

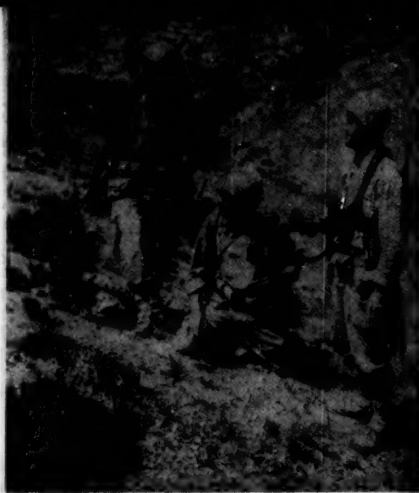
#### Mortars — company control



gained by cutting down on the officer overhead in the rear echelons. There will have to be fewer assistant adjutants, assistant supply officers and assistant headquarters commandants in order to provide these additional rifle company and rifle platoon commanders. Can this be done within present officer strength ceilings? It can by lightening the administrative load now burdening the combat echelons. A method of lightening this load will be discussed a little later on.

What would this revised infantry battalion have in addition to its four rifle companies?

We have mentioned a machine gun company. Just prior to Pearl Harbor, it will be remembered, the old-style machine gun company, with the addition of a mortar platoon, became the battalion weapons company. During World War II, the weapons company as such disappeared from the tables of organization, and each rifle company was bolstered by an organic machine gun platoon which had a complement of both heavy and light machine guns. The mechanical similarity of the LMG and HMG tended to obscure their widely different capabilities and limitations. Reduced to simplest terms, the pattern of machine gun tactics which then evolved was this: The light machine guns were "offensive" guns and were usually attached by section to the rifle platoons while in the attack. The heavies were considered to be "defensive" weapons. As part of the "attack by day, defend at night"



***Less paper work in the rear  
... more officers up front***

tactics used against the Japanese, it was usual to bring up the heavies (along with the mail, rations and water) as the battalion dug in for the night.

The machine gun tables of organization in effect at the outbreak of the Korean trouble perpetuated this over-simplification of machine gun tactics. The "peacetime" battalion

had the machine gun platoons of its rifle companies armed with both heavy and light guns. Supposedly, the gunners were trained in both weapons. Actually, as a result of the deterioration of machine gun tactics during the latter part of World War II, the LMG was stressed and the HMG relegated to the company storeroom. The "wartime" battalion pulled the heavies away from the rifle companies and reconstituted the heavy machine gun platoon as part of the weapons company. This was fine except there was no reservoir of experience with the heavies upon which to draw. To most of the younger NCOs and junior officers, the HMG was either unknown or discredited. A considerable period of reorientation and re-education had to pass in Korea (offering as it did a type of terrain admirably suited to heavy machine gun tactics) before the full value of the HMG was realized.

How does this discussion justify a machine gun company?



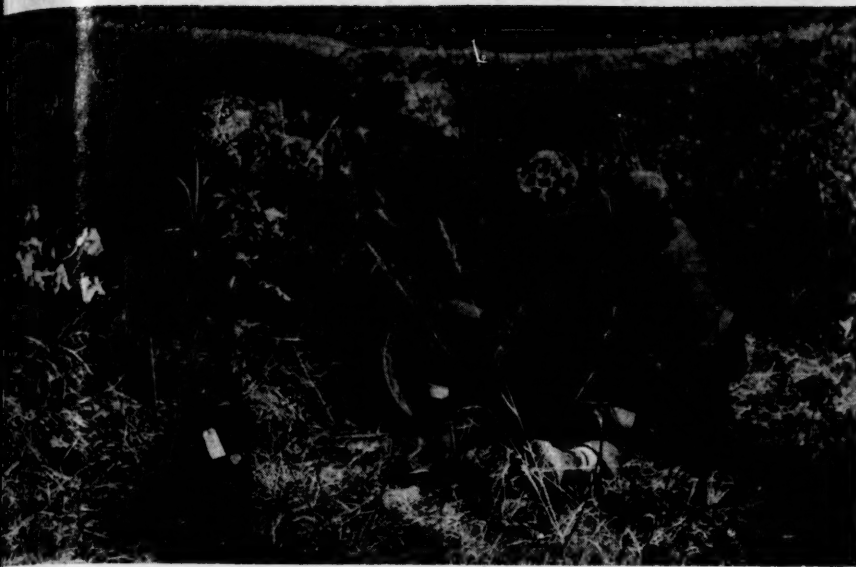
***"Heavies" — their value rediscovered***



***Base of fire — organic to the rifle platoon***

Uniformity of training is one thing. Improved combat effectiveness is another. The proposed company would consist of four platoons equipped with both the HMG and LMG. The company commander would be the battalion machine gun officer. The number of HMGs and LMGs employed could be varied to meet the demands of the terrain and enemy situation. In the defense, if need be, all of the guns could be used because, as has been frequently demonstrated, the field manual is correct. It states that in the defense a machine gun squad can man two machine guns and act as a firing section.





### ***"Reckless" 75s — properly a battalion weapon***

The rifle company commander would get better and more flexible support, yet would be freed of the burden of the training and administration of the machine gunners. At the same time, he would never be entirely devoid of machine gun support because he would have one LMG organic to each of his rifle platoons. Further advantages would accrue in reorganizing after casualties.

At present, the rifle company commander is forced to draw rifle replacements from his machine gunners and vice versa. (A real case of robbing Peter to pay Paul.) Too often, for example, the machine gun platoon commander is the machine gun platoon commander only until one of the rifle platoon leaders becomes a casualty.

So much for the machine gun company. Consider now the battalion weapons company.

The antitank assault platoon can stand as it is. Its performance against the vaunted T-34 tank in the early days of the Korean action is sufficient testimony to its effectiveness as an anti-tank echelon, and its efficacy in the assault of fortified positions has been too often demonstrated to need any repetition here.

The 81mm mortar platoon could be modified in one of two ways: It could be given eight mortars instead of the present six (as was often done informally in Korea), or its complement of personnel could be reduced slightly. (There's a point of diminishing returns so far as the

assignment of ammunition carriers is concerned; there's not room here, however, to discuss this point in detail.)

As a third platoon, a 57/75mm recoilless rifle platoon should be added. As the Army has already decided, the 75mm is properly a battalion weapon. When attached to a Marine infantry battalion in Korea it was ordinarily attached in turn to the weapons company or perhaps one of the rifle companies. The one great criticism leveled at the weapon was that there were too few of them available. In rugged terrain the 57mm rifle was perhaps more helpful than the 75mm. While the Marine Corps has never adopted the 57mm officially, those units in Korea which managed to arm themselves with it found the gun to be extremely useful in mountainous country where everything had to be hand-carried. The 57mm gun itself was not so much lighter than the 75mm, but the decreased weight of the 57mm ammunition made a tremendous difference in the number

of rounds which could be carried.

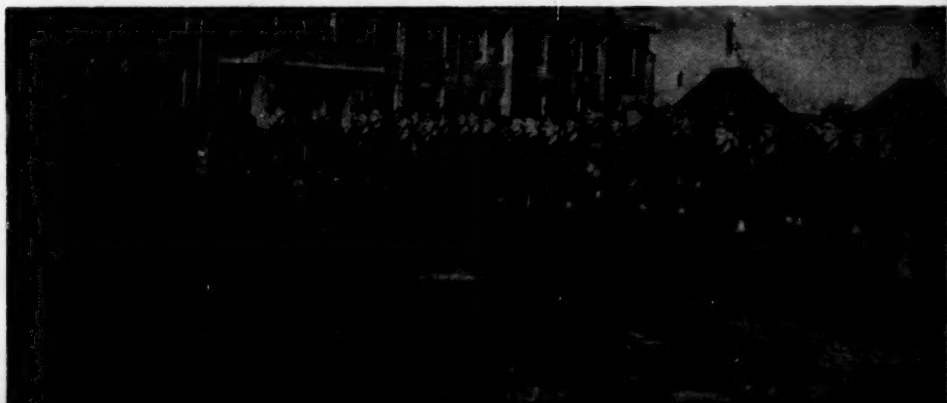
Four rifle companies plus a machine gun company, a weapons company and a headquarters and service company, would be the recommendation for a reasonably self-contained, semi-independent infantry battalion, organized within present manpower allowances, at the same time offering greater flexibility, increased fire power and significantly improved combat effectiveness and efficiency.

Our next proposal would be to do away with the infantry regiment as a tactical organization.

Let the regiment be an administrative and training echelon and let it remain in the States. Readers who have studied the organization of foreign military establishments will recognize this concept as an adaptation from the British Army. Marines who visited the command posts of the British Commonwealth Brigade (and later the Division) in Korea were amazed and impressed by the simplicity of these headquarters. At least part of the reason was the elimination of much of the administrative load which presently must flow through Marine operational channels. The British have quite successfully separated their operational and administrative chains of command, and there seems no good reason why we cannot do the same. The German Imperial Staff, (no mean critics) estimated during World War I that the British regimental system was worth ten extra divisions to the British Expeditionary Forces.

Impartial observers labeled the 1st Marine Division and the British Commonwealth Division the two best United Nations divisions in Korea. In terms of manpower, the Marine Division was significantly larger than its sister Army divisions.

### ***British organization — a dividend in combat effectiveness***



while the British Division was considerably smaller. In terms of organization then, the British seem to have gained a dividend in combat effectiveness over both the Marine and U.S. Army divisions. The secret would seem to lie in the elimination of the regiment as a combat echelon and the substitution of the brigade.

Traditionalists should approve such a substitution in the Marine Corps. The term "Marine Brigade" has a fine historical ring (Belleau Wood, Blanc Mont, Iceland, Guam and Pusan to cite some specific examples) and would certainly be better terminology than RLT or "regimental landing team," a device by which the Marine Corps semi-recognizes the obsolescence of the regiment as a tactical unit.

The proposed Marine Brigade would normally consist of a nucleus of four infantry battalions (again the "square"), plus supporting troops—but it could have as few as two battalions and possibly as many as six, depending upon the ubiquitous "situation."

This discussion is too brief to allow room for more than a suggestion as to how such a reorganization would affect the organization of the supporting arms and services. An obvious parallel is that the artillery regiment would cease to function as a tactical unit and the old artillery corollary to the rule of the triangle—to wit, three 105mm battalions in direct support, one 155mm battalion in general support—would have to be replaced by a more flexible formula. As for tanks, at times a brigade might be adequately supported by a company, at other times a tank battalion or more might be indicated.

If a division headquarters was



*Artillery—the formula should be more flexible*

superimposed upon a brigade, then the brigade supporting and service troops could be regrouped as division troops. A Marine division could have from two to four brigades.

As for the parent regiments, they would be permanently based at Camp Pendleton and Camp Lejeune and would function as the permanent administrative and training echelon immediately superior to the infantry battalions. There would be no fixed limit as to the number of battalions subordinate to a particular regiment. In time of war or lengthy emergency (as was the case with the British in World Wars I and II) a parent regiment could turn out many battalions. Nor would it be necessary that battalions from the same regiment be brigaded together for operational employ-

ment. In fact, it has been against British policy, since early in World War I, to brigade together battalions from the same regiment.

This brigade plan presupposes that Marine infantry battalions are interchangeable units. Are they? The record indicates that they are. Witness the formation of the 1st Marine Division while it was literally en route to Korea in the summer of 1950. The 5th Marines, fighting on the Pusan perimeter, were not expanded to the wartime tables until just prior to the Inchon landing. The 1st Marines were formed in something like ten days from battalions and separate companies drawn from the East and West coasts. The 7th Marines actually joined their third battalion, unseen, from the Mediterranean.

For example, our infantry battalions—the building blocks, so to speak, of our Marine brigades and divisions—should be used in three ways: as original tactical units, as individual replacements, and as unit replacements. Which, in effect, introduces a new subject: the matter of combat replacements.

Certainly no one was completely satisfied with the World War II solution to the replacement problem. It will be remembered that it was customary to assign several battalion-size replacement drafts to a Marine division just prior to an op-

*Peleliu—a point of diminishing returns was reached*





eration. During the landing phase, these replacement drafts were attached as labor troops to the Division or Corps shore party. From here they were fed into the combat echelons as needed. Theoretically, at least, their role in the shore party was in turn assumed by arriving garrison force personnel.

In modern warfare, the bulk of the casualties has been suffered by the infantry. (During the Civil War, a favorite jeer by the foot soldiers was "Who ever saw a dead cavalryman?" During World War I, it was "Who ever saw a dead quartermaster?" By World War II, it had become "Who ever saw a dead public relations officer?")

Fortunately, an infantry battalion is a rather resilient structure. It can receive surprisingly high casualties, absorb large numbers of individual replacements and still maintain a high degree of combat efficiency. But—depending upon the circumstances—there is a point of diminishing returns, a point where resiliency is lost and the addition of more and more replacements no longer restores the combat potential of the battalion. This point has seldom been reached by Marine units, but it has been reached occasionally—notably at Peleliu, at Iwo and Okinawa. Fortunately, these operations were successfully concluded before the deterioration of the infantry battalions was complete. But the effects were severe enough to set various persons to thinking in terms of unit rather than individual replacements and of the feasibility of integrated training for replacement drafts. The war ended before this planning reached full fruition.

The Korean affair presented fewer replacement problems than did World War II. For one thing, the action seldom reached the intensity of World War II campaigns, and units ordinarily had the opportunity to "snap-in" their replacements before exposing them to the full demand of battle. For another, the Marine Corps was committed to maintaining only one division in the field rather than six. Also, the requirement for administrative replacements (i.e., "rotation"—a luxury which can be afforded only in semi-wars) was predictable, and this meant that replacements could be

channelled in a reasonably steady flow to the Far East. Finally, the machinery for providing replacements was much more satisfactory than the rather helter-skelter system of World War II. (Remember the horrors of the "transient centers?") Motivation toward team spirit, so essential to Marine tactics, could scarcely be expected to flourish in a replacement system which emphasized the individual replacement to the complete exclusion of unit integrity.

Interestingly enough, at the same time Training and Replacement Command was forming its Replacement Drafts (later re-designated Replacement Battalions—a hesitant step in the right direction), the newly activated 3d Marine Brigade (now the 3d Marine Division) was forming its first infantry battalions. In virtually the same time required to train and form a draft of individual replacements, the 3d Marines had succeeded in bringing to a high degree of combat effectiveness three infantry battalions. Any commander in the field, given his choice be-

tween a draft of replacements and a trained infantry battalion would, I'm sure, prefer the infantry battalion. (The closest approach to a large scale unit replacement in Marine history is probably the substitution of the 321st Infantry Regiment for the worn-out 1st Marines at Peleliu.)

In light of the flexibility, mobility and dispersion seemingly required for present day amphibious warfare, it would seem well for the Marine Corps to take the following steps:

*Re-examine the infantry battalion*, the basic tactical unit, with the goal of making it as flexible, versatile and tactically self-sufficient as is possible.

*Re-examine the division organization* with a view toward ridding it of its present rigidity and weighty administrative overhead. A further study of the British regimental-battalion system seems indicated.

*Re-examine the present replacement system* with the objective of bringing into proper balance the possibility of both individual and unit replacements.

USMC



**Replacements — individual rotation is a luxury**





By  
Maj George Hanna

# A CLEANIS

❖ CONSIDERING THE NUMEROUS CRITERIA for success in aerial warfare, the most significant (both by popular conception and military exigency) is speed. However, coupled with the rapid development and growing capabilities of present and proposed aircraft, speed will demand increased dexterity by pilots and more specialized profiling of the craft they fly.

The elements of air warfare defy simple categorization, thus, in stratagems involving the use of aircraft, a common measure of duplication is unavoidable. Defense aircraft can and have performed, to a lesser degree, attack and observation functions. Attack aircraft can and have been forced to "double as" defenders. All-weather configured craft, as in the past, may be conscripted to hurl bombs and rockets at ground targets, or to attack and defend themselves against swifter killers in clear-sky, daytime activi-

ties. Further duplication is peculiar to Marine aviators whose warplanes are equipped with arresting hooks and wing folding devices, although it may never be necessary for them to land aboard a flat-top.

Where not abused, this overlapping of effort in the past has provided emoluments in economy and versatility. Unit commanders and individual pilots, acting upon their own initiative in routine and emergency situations, have performed maneuvers for which their machines were never intended. One type aircraft could do many things to the benefit of all concerned. Thus we had torpedoes lashed to the matronly old Catalina flying boat back in the Solomons campaign of World War II, and she proudly flapped out to do battle against Japanese men-of-war. In consideration of modern aerodynamic principles this feat borders on the miraculous.

To take a speedy, highly specialized plane of today and commit it to performing tasks for which it was never intended, would produce poor results, be uneconomical and would contribute toward a general frustration of pilots and maintenance crews alike.



In an air age where speed and specialization are prime factors, designers should strive for . . .

# ANISH FOR A FAST WALLOP

Demands for greater speeds are reducing the versatility of combat aircraft. The day is rapidly closing wherein one type of aircraft can satisfactorily perform more than one specialized task and still maintain speed components comparable to other craft against whom they suddenly might have to defend themselves. Understandably, a high performance aircraft, by tomorrow's standards, cannot be designed with a built-in torpedo bay, rocket and bomb racks, a separate seat for observer, several hundred pounds of electronic equipment, fixed and flexible guns and cannon, landing hooks, wing folding devices, external fuel tanks and still drive through the air at super-sonic speeds. Possibly an over-simplification of the problem would be to state: the greater the speed, the greater the reduction of versatility—the greater the speed, the greater the specialization.

I suppose we could carry this

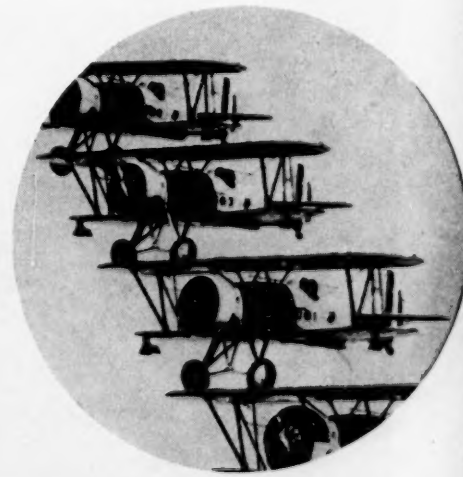
equation to its ultimate conclusion wherein airplanes would become so fast, their degree of specialization so immense, they would scream through the skies at unlimited speeds but would be incapable of inflicting damages to the enemy—the ultimate in diminishing returns.

Speed and specialization therefore, are close partners, destined to increase their degree of intimacy as their requirements intensify.

A determined step in this direction was the creation of the specialized F3D Skyknight, the first all-weather, jet defensive fighter designed for the Navy. Here the grim twins, speed and specialization, exerted a heavy hand. Overlooking incidental problems relative to the physical and mechanical behavior of the Skyknight, the aircraft, in order to house necessary electronics equipment, sacrificed a certain degree of speed. To suggest that this feature was renounced at the expense of spe-

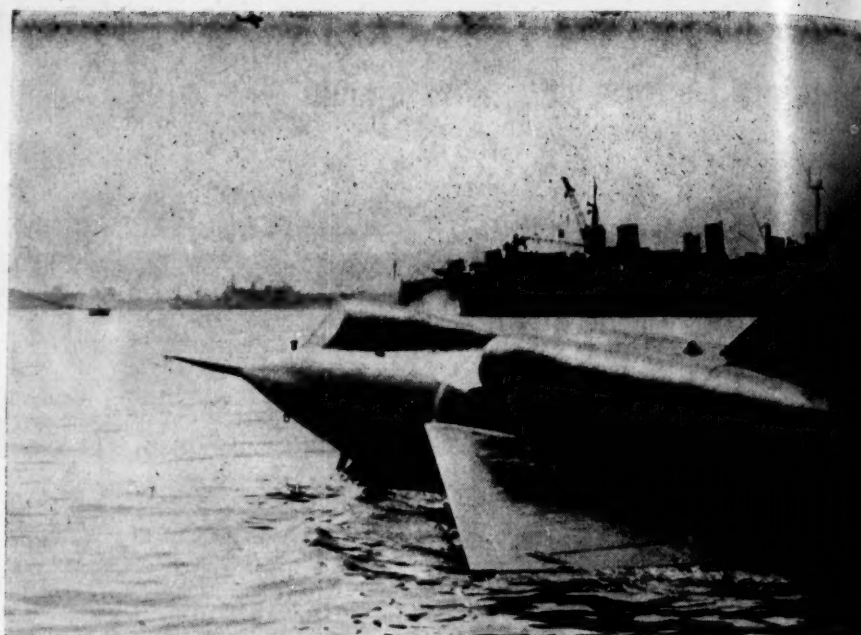
cialization would be presumptuous, but it is well to mention the Skyknight, in combat, served only as a defensive fighter and performed no attack missions in Korea. Very probably the excellent record of this plane in combat resulted from the fact that it did not step out of its field to attack enemy road routes at night, but concentrated its entire effort in defending friendly cities, installations and bomber craft at night—a mission for which it had been specifically configured.

As requirements for speed demand greater specialization, we can assume a greater variation of aircraft types to be flown by Marine pilots in the future. Indeed, if the ultimate in speed and specialization is achieved and Marine squadrons continue to be homogeneous units, each flying a separate type of aircraft, it may conceivably require more than the present three air wings to encompass the variations of squadrons



dedicated to performing the missions of Marine Aviation. This would certainly be true if all the different type aircraft now under scrutiny by military and civil air tacticians, are produced and given to Marine Aviation.

Problems confronting aircraft designers and producers striving to build speed and utility into planes of supersonic performance are many. For example, in designing an aircraft to perform well at speeds above the sonic, the wing must be swept back preferably 80 degrees or more, and constructed so thinly it cannot properly house fuel cells or landing gear. So; put the landing gear in the fuselage and the fuel tanks at the wing tips. But here again, the fuselage must be kept slender and it is already taken up with the engine. The thin wings, burdened with big tanks (for a supersonic plane is a veritable glutton) can hardly be built strong enough to withstand combat stresses and strains, unless it is a delta-wing, or shaped like a paper dart (the kind kids make and sail at the blackboards in school). This type wing poses a whole new set of aerodynamic problems. In some of the delta shapes the entire scheme has been reversed. The engines have been placed at the wing tips and atop the vertical stabilizer and the fuel cells have been situated in the fuselage and wings, making the plane a literal flying fuel tank. In the swept-back wing types, high-property aluminum alloys have poor cross-grain properties and low elongation, thus they fatigue easily. So, if the thin, swept-back wing is to flutter



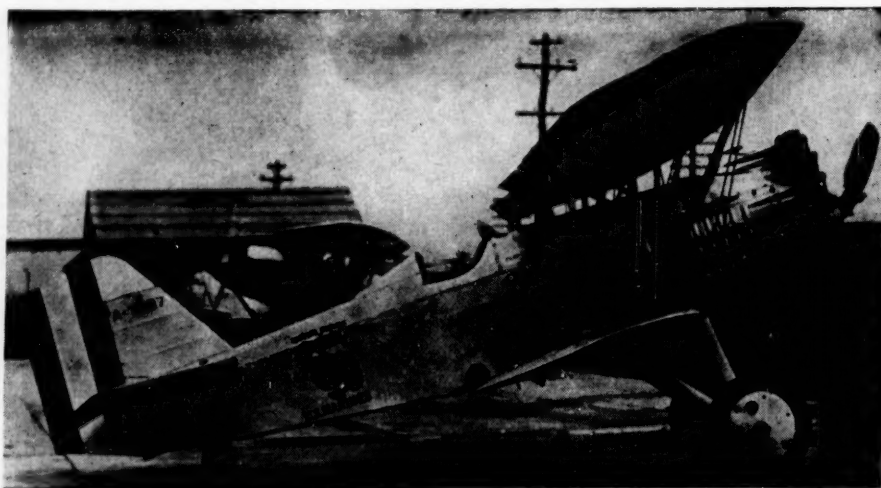
***A sort of aerial surf board***

and flap in the supersonic breeze, the alloys will eventually weaken, and if the wing is to be built inflexible, it should be almost solid.

Heat and cold are other considerations. Stratosphere temperatures of -94 to -112 degrees Fahrenheit caused engineers (concerned with the effects of cold on the notch sensitivity of certain steels and other sections which it was feared might easily become brittle and crazed) many sleepless nights. Now, however, the big problem is not the cold, but how to combat the heat generated by aircraft in supersonic flight!

It would seem that high speed encourages no happy mediums. It plays its hand in extremes where there is no happy in-between.

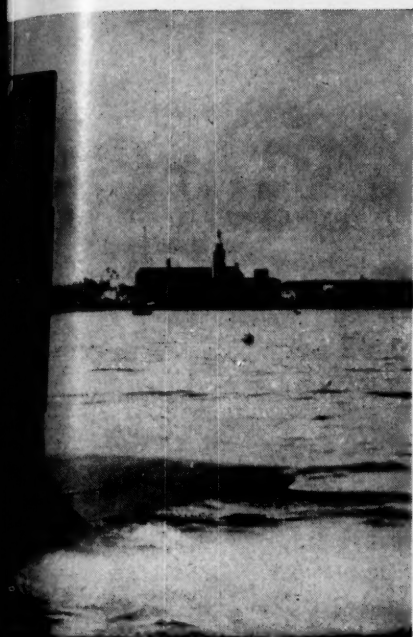
***The good old days — plenty of room for sandwiches***



To return to the swept-back wing. One solution of what to do with the landing gear is to remove it. Thus we have the Sea Dart, a sort of aerial surf board, which has no gear, but skims across the water on retractable skis. Other craft may be appearing which will land and take-off from trolleys or skids, and the VTO (Vertical Take Off) aircraft land and take-off from nothing but their tails!

To the engineers, speed and specialization are making even further insistent demands. It used to be, in the old days (if a plane was scheduled to fly a long-range mission), a simple matter to hang more belly tanks under the fuselage, provide the pilot with an extra pillow, a bigger map and launch him. Now, however, such things as lift coefficients enter the picture. For in the near, super or just sonic realms of flight, long-range aircraft must have as high a lift/drag ratio in the wing as possible and this can be realized only by cruising at a reasonably large lift coefficient. Thus, in constructing long-range fighter aircraft, the thin swept-back and delta wings are no good. These wings have low slopes to their lift curves so that a large lift coefficient contributes a large incidence, which at supersonic speeds induces a lot of drag. So, for a swept-back fighter, more fuel is needed. This means adding fuel tanks, which are an additional source





the Sea Dart

Convair

water, short air strips, taking off by means of their own built-in prowess, as in the case of the Sea Dart and the VTO craft, or by means of such agents as catapults, jato and other type boosters. These same craft will land in extremely short distances by means of arresting gear assemblies, highly individualized berths or slips, or again as in the VTO types, by squatting down on their tails. But whatever it is, each type of aircraft will demand a specialized ground crew of mechanics, engineers and technicians to keep it operating, and pilots rigorously trained to perform the tasks for which the craft were created. Air strategists and intelligence officers must be thoroughly familiar with the capabilities and limitations of each type in order to promote maximum results.

The problems confronting a future Marine air wing commander will be numerous, not in the least simplified by a realization of how a nuclear explosion could upset the fine balance of his aerial task force. Shall he divide his killer craft according to present practice into homogeneous squadrons, the ideal displacement for attaining highest level economy and efficiency, and disperse them about in numerous air strips? But supposing one squadron were wiped out, depriving the commander of all his specialized single performance killers? How then, would he be able to accomplish his mission, except through the uneconomical and inefficient expediency of turning that singular mis-

sion over to other squadrons, ill-equipped and poorly trained for such a task with their own missions still to perform?

Well, then, shall the wing commander scatter his aircraft throughout the task force making his squadrons heterogeneous, each unit a complete and miniature part of the whole? In this situation, if one unit were wiped out, there would be sufficient variety of pilots and specialized aircraft remaining in the other units trained and capable of carrying out the prescribed missions. But here, the problems associated with such heterogeneous units would be numerous; combat efficiency would be difficult to maintain and the cost would be high.

Should the air wing be based at some points far remote from the reach of the enemy where ready maintenance could be achieved? Aircraft and crews could be rotated to advanced strips and landing facilities set up and camouflaged near the scene of action from where they would carry on their assigned tasks. The unique capabilities of many modern Navy aircraft allowing them to operate from very small fields or even table tops, would be a great asset in thus moving numerous small installations near the front lines. In fact, this last most inefficient assignment may easily be the method chosen as a result of the threat of atomic bombs. But here again, this is an inefficient and expensive proposition.

At present, aircraft design and

### Today — no room for pin-ups

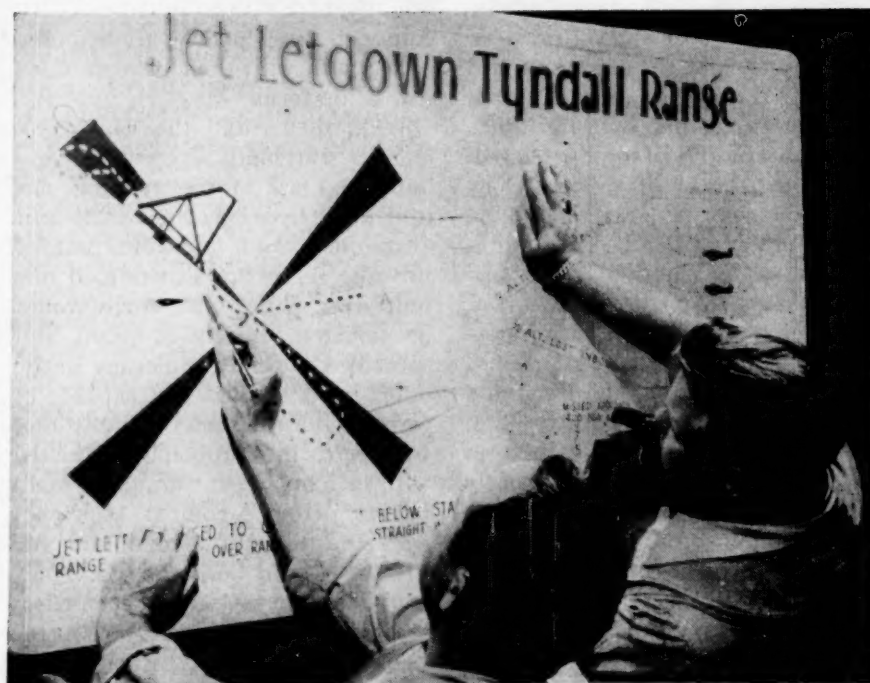
Sperry



of drag, which requires more fuel tanks, which means more drag, etc., etc. . . .

Furthermore, in the good old days, a pilot had plenty of room in the cockpit. He could carry a brief case, sandwiches, comic books and an extra uniform, all in the cockpit. If he liked, he could hang mirrors about for the purpose of spotting enemy planes diving at him from above. Today, with stowage capacities growing ever more acute, it is doubted whether the pilot will have room to hang a picture of his girl friend. For as speeds rise, the vexing problem of drag increases. Greater speeds mean bigger engines and fuel tanks; thus thinner wings and more slender bodies are required to compensate—as the one enlarges, the other narrows. Squadron commanders are not going to be able to convert fighter planes and long range patrol boats into dive bombers or torpedo bombers by the simple expedient of hanging types of ordnance under the wings and fuselage. An aircraft is going to have to be constructed from the first bolt to the finished product to perform a single functional mission with definite restrictions on range, speed, altitude, maneuverability and take-off and landing locations.

At present, we have aircraft in various stages of creation, destined for highly individualized performances, capable of operating from the



contemplated capabilities, according to type, are in a healthy state of flux and an immediate war wouldn't catch us short-handed. As individual combat requirements presented themselves we would be prepared to satisfy them, utilizing the best of numerous proposals which are the subject of present debate and examination. We are capable of turning in whichever direction particular combat situations and experiences might dictate. The field is flexible.

Conditioned by its tactical mission, I would recommend the partitioning of Marine Aviation into two very general categories. There would be, (1) aircraft for defense, and (2) aircraft for attack. Defense aircraft would be further broken down according to type into intercept fighters and general utility fighters. Attack aircraft would be divided into categories depending upon the definite and varied types of targets, both day and night, ground and sea, which past combat experience and present forecasts indicate would merit destruction. Therefore, Marine pilots, of whichever category, would be expected to meet the enemy under every circumstance and any environment, either day or night, and destroy him.

Poor visibility and darkness will undoubtedly be utilized by the enemy to screen his aggressive aspirations either on the ground or in the

air. As formations of aircraft cannot operate effectively under all-weather visibility conditions, defending fighters must operate as lone wolves, without recourse to companions who might lend assistance in the event of hardship or failure. Each intercept fighter must be capable of administering certain and sudden death; near misses on an attacking enemy would be disastrous.

Intercept fighters will operate under a continual disadvantage as they must stop attacks after they have already been launched by the enemy at times and under circumstances of his own choosing. To cope with the enemy's initial advantage, speed and specialization obviously comprise the primary weapons, thus increasing the urgency for precise requirements of the intercept mission. A good defensive intercept fighter must be slick as a swizzle-stick and deadly as a snake. It must be able to launch with haste and tear into the enemy at any altitude and speed and destroy him. It should not be concerned with anything else for any added versatility would slow it down. The Navy's present fighter, the 752.9 mph record breaking Skyray, is a prototype of what is needed in this class.

This deadly defensive complex is not so imperative with the general utility fighters for their scope of op-

Some need large fields . . .

. . . others only a table top

Convair





## Intercept—slick and deadly

erations will be broader. However, the demands of speed require these craft to be highly compact, versatile machines as devoid of extraneous objects as possible and thoroughly configured to perform the two or three related tasks for which they are created. If the highly specialized, one-duty intercept fighter is to be a clean "dish," profiled for individualized action, the more versatile general utility craft already encumbered by the nature of its assorted responsibilities should be even more devoid of any unnecessary weight. The McDonnell F3H Demon and F2H-3 Banshee, both single seater, all-weather fighters and fighter-bombers provide good examples of the future general utility fighters.

Attack aircraft present a slightly different problem. As they will be accomplishing missions of aggression and retaliation, they can be utilized at times and places of our own choosing. In planning attacks against the enemy, we will utilize the elements of weather, darkness and geography, when practicable, to assist us. Thus, attack aircraft will enjoy certain tactical advantages generally unknown to defense craft. For this reason, we can justifiably

**"Bird"—every purpose in the book**



sacrifice a certain increment of speed for added ordnance. The Chance Vought Cutlass A7U and the Douglas A3D, both of which have special atomic bomb delivery capabilities, are a sample of iron birds destined to knock the hats off any enemy. Fast, long ranged and carrier qualified, they are able to produce a devastating wallop. However, under the conditions imposed, the "dish," of necessity, will be somewhat more cluttered; speed and specialization will be overruled by the mailed fist.

The valiant old Corsair uniquely illustrates this principle of speed and specialization as it affects defense and attack craft. First produced many years ago as a thoroughbred defensive fighter, it slowly declined to attack functions as newer craft were created capable of greater speeds. Finally, after passing through the fighter-bomber stage, it became, with a few more modifications, the AU, a specialized close support, attack bomber. During this de-evolutionary process, it served about every purpose in the book. As a night fighter, it bristled like a porcupine with sticks, wires, flame-dampening fenders, bulbs, domes, rocket rails, bomb and tank racks and anti-icing boots, to name most of the encumbrances, either plastered flush or jutting out all over it. But the point

is, the plane, whether used or abused, performed moderately well as an attack craft long after the element of speed rendered it obsolete as a defense fighter.

Marine and Navy defense jet fighters in Korea well illustrated this principle. Versatile and slow, because of carrier operational requirements, these aircraft were unable to battle on even terms with the more specialized Mig 15. Thus, the Panthers were equipped with bomb and rocket rails and served passably well as attack craft in which capacity they were used exclusively throughout the war.

An example of specialization for attack, carried to radical extremes, is the KD 25 Fletcher Defender, so mis-named probably because it was designed to defend friendly ground troops from enemy ground attacks in close support missions. This tiny craft—about the size of a Piper Cub—possessed one capability, that of delivering very limited ordnance against a small target. It was envisioned swarms of these little "Defenders" would be stationed at small strips near the front lines where they could thrust a small bomb upon the enemy at tree top level and return in a matter of minutes for a repeat performance. Lacking speed and ruggedness, it is

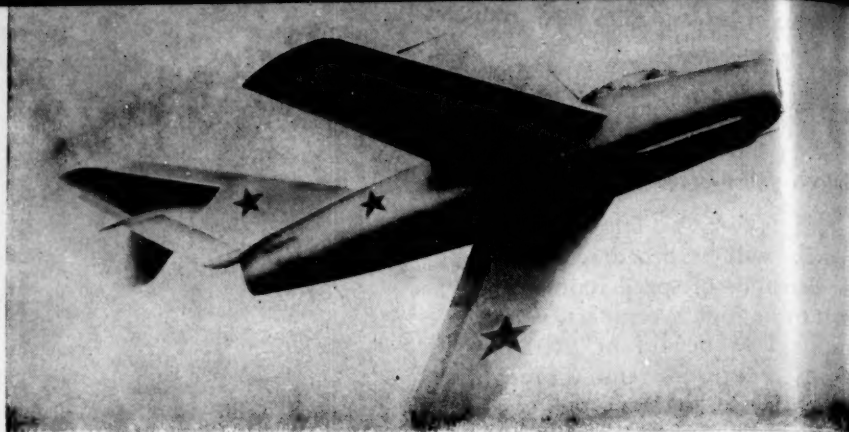




doubted if these intensely specialized "flying mortar platforms" will ever see combat. Their attack capabilities do not seem to be sufficiently great enough to compensate for other deficiencies.

One of the most controversial subjects of debate revolves around the engineering requirements of all-weather fighters. These are numerous. Speed is a requirement for defense all-weather craft, which must also carry heavy electronics equipment and possibly additional bulky space for an airborne intercept operator. To provide suitable all-weather activity, such specialization as is possible must be demanded. Thus, it hardly seems feasible to expect all-weather craft to be versatile enough to perform both attack and defense functions, further loading the air frame with encumbrances. Of these general utility aircraft one group should be designed only for defensive missions and, as such, be as streamlined and speedy as possible. Another group should be designed only for attack functions, being capable of carrying heavy loads for long distances and equipped with such instruments as necessary to drop their explosives accurately under any aerological conditions.

Since a determined enemy will almost surely intensify his activity, both ground and air, under conditions of poor visibility, air defense and ground attack under these terms becomes vital. Any defensive action on our part generally will be undertaken after the enemy has originated



**Mig 15—rough opponent for an all-purpose plane**

his assault, gaining for him the initial advantage. Therefore, our intercept all-weather fighters should enjoy the maximum of speed and specialization. Necessary electronics gear should be as compact and simple to operate as possible, either independently or in cooperation with ground intercept or airborne early warning operators.

Robert J. Baldwin, projects engineer for the McDonnell Aircraft Corporation, states one of the criteria for future defense aircraft will be smallness of size providing greater speeds, maneuverability and added simplicity of handling, also allowing pilots to perform their missions more rapidly and accurately. Intercept all-weather craft, according to Mr. Baldwin's definition, if kept clean could possess the following wholesome features:

1. Greater speed and maneuverability.
2. More rapid climb to altitude.
3. Fewer maintenance problems.
4. More economy. They would

be cheaper to build and cheaper to maintain.

5. Less requirement for trained personnel. In a small, single seater craft only the pilot would require training.

In considering the demands for super-sonic speed the smaller, cleaner, less complicated and more economical, more highly specialized all-weather interceptor seems to be the answer.

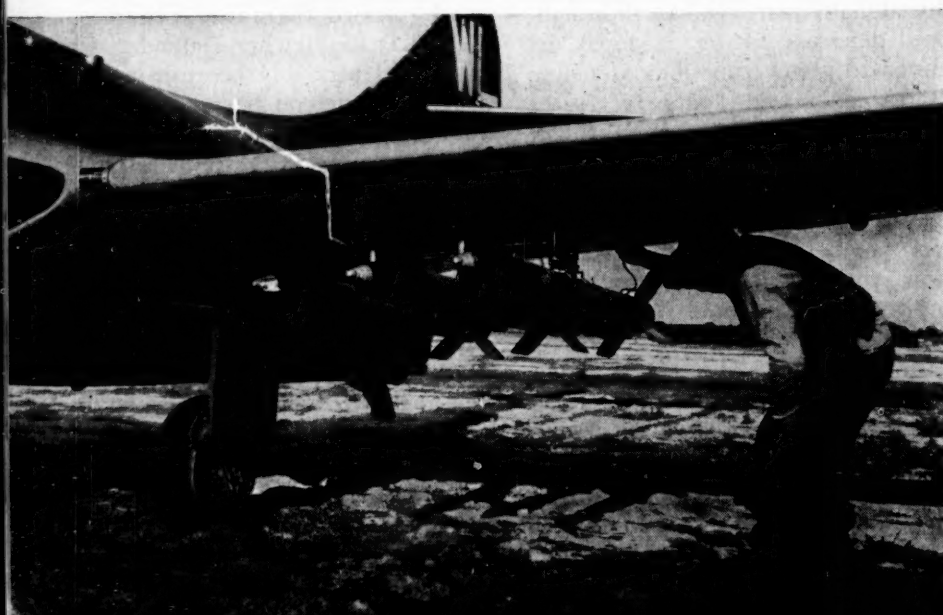
Some disadvantages may be these:

1. Even with simplified electronics equipment, there still could be too many levers for one pilot to handle satisfactorily. In any event it will require a high level of pilot proficiency.

2. Intercept distance would be less, as radar gear would have to be smaller and simpler. For this reason a greater reliance would have to be placed on ground controlled or airborne early warning operators whose equipment could break down and who would be vulnerable to enemy destruction. In a word, the single seater has the capability of possessing the major criterion for successful air defense—speed, but it also has some limitations.

The specialized characteristics of the more versatile two seater all-weather aircraft can be used to plug the gaps created by weaknesses in the single seater. A greater scanning of the sky and ground for targets is possible with the technically trained observer, devoting full time to navigation and the interpreting of electronic echos from his more efficient but complicated set. The two seater craft enjoys a greater measure of freedom as less reliance is required from external controlling mediums. In search of targets, it can thus penetrate deeper into enemy terri-

**Panther—loaded down with bomb and rocket rails**



tory. Possibly, also, the two place craft would be safer for several reasons, one of which would be that pilots would experience less fatigue; and another, landing speeds would probably be slower. However, the dish is not as clean nor yet as small.

Attack craft of the all-weather heritage would have as their major requirement the directing of ordnance upon the enemy, generally under such circumstances as combat plans would dictate. Therefore,

selves if much more could not have been accomplished if specialized craft had not been utilized for the two very un-similar tasks; air defense and ground attack, made even more divergent by darkness. Carrying half a ton of useless electronics equipment, pilots were handicapped in attempting to conduct maximum effort attacks against ground targets. In the case of the Tigercat, hinderances included a second cockpit, with observer where normally an

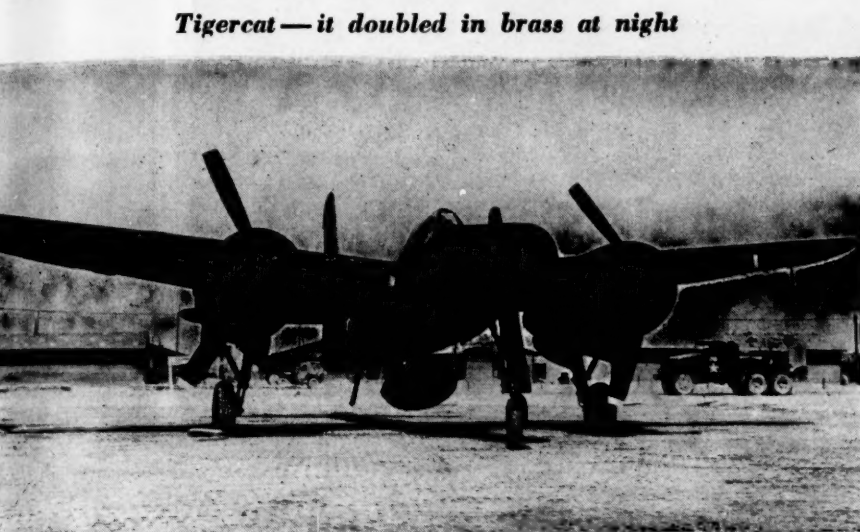
limited missions or to change their appointments entirely as was noted in the case of the "U-Bird." In the name of economy, this may seem like a good practice, if not carried too far. In Korea it was carried to extremes. Waste is never economical, and if we possessed a concrete and accurate evaluation of the ordnance wasted, the gasoline and oil expended on ineffectual sorties, not to mention redundant maintenance costs in keeping the old crates airborne, it is debatable whether the use of these obsolete craft justified the inefficiency and waste involved. The millions of dollars necessary to turn out a new line may have been cheaper in all respects than wasting millions on a half-effective combat weapon.

However, planes cannot be discarded the day swifter, more efficient models appear. Therefore, vintage craft should be utilized as general utility, day or all-weather attack craft until such time as they contribute toward excessive waste and inefficiency. Such versatility as was shown in Korea should not be considered as practicable in any tactical situation in the future.

Speed and specialization, the grim twins, are tightening the radius wherein just about every job will necessitate specialized aircraft. The "dish" must be clean if it is going to produce results in tactical air warfare.

USMC

### *The "dish" must be clean*



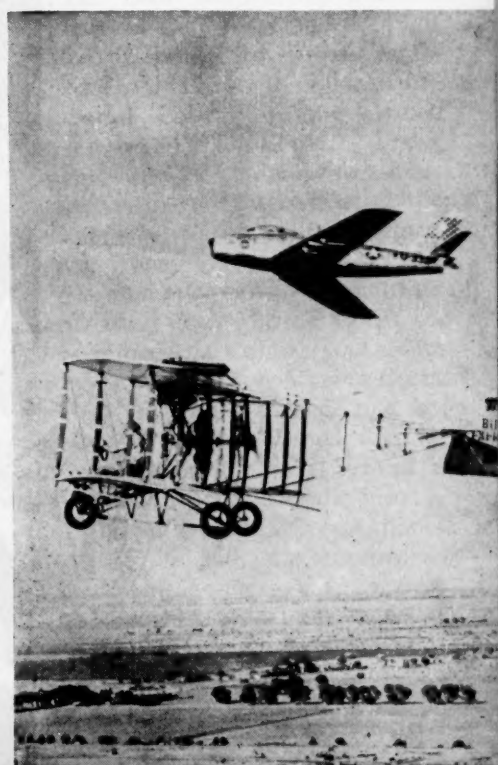
weighty electronics equipment for air scanning could be reduced to a minimum, or in some models where maximum attack capabilities are desired, electronics equipment could be eliminated entirely. Speed, conceivably, could be relegated to a minor role and emphasis placed upon producing a maximum wallop. The profile of the all-weather attack craft could be streamlined either for fast, shifty but limited attack capabilities, or ponderous, heavier and more versatile attacks. Future combat situations may call for both.

Korea offers a note of sympathy to the all-weather pilot who earnestly attempted to accomplish his mission satisfactorily. In this zone, the F7F Tigercat and the F4U5-N Corsair (both originally configured day-fighters) took to the air at night primarily on attack missions, with the pilots never knowing when they would be called away from lucrative ground targets to perform intercept functions against enemy aircraft. This happened numerous times. Those tempted to point with pride at this display of versatility should think again, asking them-

added fuel tank would reside. If additional napalm or bombs could have been substituted for the needless electronics gear, more trucks and trains could have been destroyed. Ask any Flying Nightmare pilot! Often, when called upon to perform defense missions, pilots were ordered to hurriedly deposit their ordnance either in the ocean or upon North Korean mountainsides, to lighten their craft and pursue an enemy bogey in the sky.

Later, when the Skyknight arrived, a more ideal situation could have been achieved. The Corsairs and Tigercats could have been stripped of their all-weather intercept encumbrances and pressed into wholehearted service as night attack craft. Indeed, the AD Skyraider, with its tremendous load bearing capabilities could have been used for night interception while the Skyknight performed its intercept services.

We have not discussed recommendations pertinent to aircraft growing old and obsolete. As these vintage lines surrender the limelight to newer, more effective craft, there will be a tendency to assign them



# The INDUSTRIAL



By Captain C. M. Boundy, USN

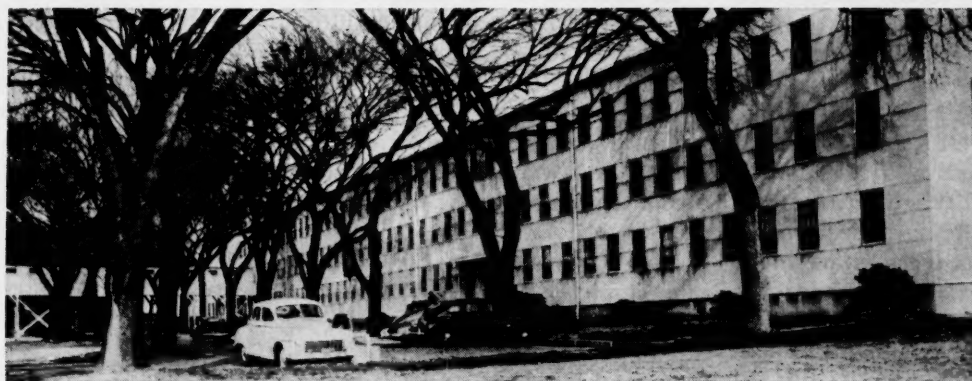


THE PRESENT DYNAMIC AND constantly changing aspects of the national defense program of the United States is reflected in a sizeable daily volume of news. It has created in the minds of thinking officers the desire for further information in the field of economic mobilization as a most important part of the national defense. Most officers are eager for the opportunity to procure such knowledge, especially if they are relieved of regular duties to devote their entire time to this study.

The Industrial College of the Armed Forces, located on the grounds of Fort McNair, Washington, D. C., presents to selected representatives an opportunity to study the entire field of economic mobilization as it relates to, and supports, military mobilization. Selected civilians from governmental departments that play a vital part in establishing national policy in the security field may be enrolled. These men are taught the ever changing problems of mobilization and ad-



# COLLEGE Of The Armed Forces



ministration of national economy.

The Industrial College symbolizes close inter-service cooperation expected within the national defense organization. In conformity with this concept, the office of the commandant is rotated among the four services. Deputy commandants of the college are appointed from each of the three services other than that providing the commandant. Similarly, the faculty of the college is composed of 35 officers and 16 civilian experts. The officers include Army, Air Force, Navy and Marine Corps. They are fortunate in having leaders in all branches of government, industry and education as consultants and advisors. The selection of students is limited to 120 senior officers and 15 civilians nominated from government departments. The size of the student body is restricted because of limited academic facilities. Advantages are offered by all major Federal Departments, including the National Archives, Library of Congress, Bureau of Standards and other agencies which provide research opportunities unequalled anywhere.

During the course of instruction, students will explore the workings of the American economy in relation to military effort and analyze economic aspects of military activities. These areas of study take on a particular significance in terms of modern warfare, which is as much a conflict between productive economies as between military forces. While grand strategy continues to have a greater appeal to the imagination of the military, all strategy is limited by what the nation can logistically support.

Recognition of this condition is implicit in the mission of the College as stated in its charter which in part reads: "The mission of the Industrial College of the Armed Forces is to prepare selected officers of the Armed Forces for important command, staff and planning assignments in the Department of Defense and to prepare selected civilians for important industrial mobilization planning assignments in any government agency."

Mission of the College, and in fact its entire being, represents a revolution in military education. It was

not until World War I that the importance of industrial mobilization became generally recognized. As a result of the lessons taught by that struggle, in 1924 the Army Industrial College was founded with nine officers in the student body. The following year the first Navy officers were assigned to duty as students at the College and the joint nature of the institution was established. In 1946 it was renamed the Industrial College of the Armed Forces. In 1947 it was placed under the jurisdiction of the Joint Chiefs of Staff as a graduate school at the highest level in the military educational system.

Within a few years of its establishment, Navy and Marine Corps officers joined the College staff as instructors. Army-Navy-Marine Corps cooperation in the College had become so firmly established that by the time World War II forced a temporary suspension of the instruction, a Marine Corps officer, Colonel Frank Whitehead, was serving as commandant.

The course includes the study of the essentials of industrial potential

for military purposes, location of raw materials throughout the world and the capacity of the country to mobilize for total war, as indicated by the following units of the course: Orientation, Manpower, Technological Progress, Natural Resources, Requirements, Procurement and Economic Stabilization, Production, Public Services, Economic Potential, Distribution, Logistics, Joint Strategic-Logistic Planning and Mobilization. Research units are assigned, lectures by staff members and experts outside the College are given. Seminars, research, consultation with specialists, written and oral presentations and reports by the students are part of the unit study. Student research also includes world-wide demography, economic mobilization and engineering. During the course they hear lectures by outstanding lecturers, statesmen, visiting diplomats and other eminent civilians.

This outline indicates the timeliness of the course, with virtually all aspects of the units present in recent important problems. Thus, the current national defense effort is, in effect, a proving ground for the principles embodied in the instruction. Under these circumstances, much of the student research deals with current information from the production front and keeping abreast of the latest national defense developments.

Since the study groups are small, excellent faculty-student relations are maintained. The lectures of the adjacent National War College are open to the students of the Industrial College, from which they learn the strategic and tactical considerations of modern warfare. After each lecture there is a question period in which the students have additional opportunity to examine the speakers' views. In the seminars, smaller groups of students are given the privilege of questioning experts who are working in the area of particular committee problems.

Individual research and committee studies are an important phase of instruction. During the year, the student will carry on research and report on several individual problems and on several committee problems. At least once during the year he will make an oral presentation to his classmates on one of his reports,

and they, in turn, will have an opportunity to question him on any aspect of the report on which they may wish additional information or about which they disagree.

To promote discussions, students are intermingled as to services and rotated as to room and committee assignments. Frequently, to stimulate interest and promote discussion, two committees are assigned the same problem and several individuals the same subject for their reports.

In addition to the lectures bearing directly on economic mobilization, other related subjects are presented from the platform. These include topics relating to social and political movements and trends, as well as important items of national defense, such as public opinion and social psychology.

The practical aspects of the course are emphasized by a program of field trips. During the year, visits are made to installations such as the Naval Gun Factory in Washington; the Ordnance Proving Grounds in Aberdeen; Air Materiel Command at Wright-Patterson Air Force Base at Dayton and Eglin Air Force Base in Florida.

In the spring, the student body is divided into ten groups, each of which spends a week visiting a major productive area such as Buffalo, Chicago, Houston, or Birmingham. During these visits the students not only make a study of the types of production, but also of the plants themselves and have the opportunity to discuss the industry's problems with senior corporation executives.

In addition to its basic resident course, the Industrial College conducts a special program of non-resident instruction. This program is presented by the Extension Courses Division through its two operating organizations, the Civilian-Reserve Instruction Branch and the Correspondence Study Branch.

The National Resources Conference is conducted by the Civilian-Reserve Instruction Branch. Under this program, two six-officer teams present a series of two-week economic mobilization courses in a number of major urban centers each year. During the next academic year, the seventh year of the program, the conferences are being presented in 16 cities.

The instruction, representing a condensation of basic materials of the resident course of the College, is attended by officers of the Reserve components of all services and civilian and professional leaders in the fields of industry, finance, science, education, labor and public life. Selected Reserve and National Guard officers are assigned to active duty for participation in the course and receive full credit for this duty. Between 200 and 300 attend each conference.

The Industrial College, in 1950, inaugurated a Correspondence Study Course based upon the materials of the resident course, making it available to field grade Regular and Reserve officers of the Armed Forces—(lieutenant commanders and above for the Navy) and to civilians who could present evidence of special qualifications for the instruction.

All persons satisfactorily completing either the National Resources Conference or the Correspondence Study Course are awarded Certificates of Completion. These are recorded in each officer's personal file. Reserve officers are able to earn 48 points (144 study hours) for retirement, retention and promotion benefits by completing the Correspondence Study Course and ten such credit points for completion of the two-week course of the National Resources Conference. Currently, some 2,000 men from all parts of the world are enrolled in the Correspondence Study Course.

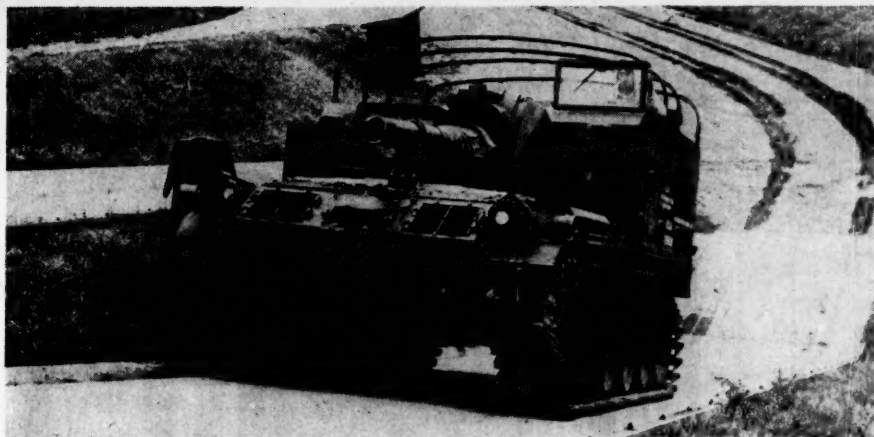
The curriculum and life at the Industrial College of the Armed Forces is planned to enrich the student officers of all services with a greater understanding of the field of mobilization and general command assignments.

Through its Resident Course, the National Resources Conference and the Correspondence Study Course, the Industrial College of the Armed Forces is recognized as the nerve center for studying America's advancement in the knowledge and understanding of the nation's economic mobilization problems. Through its efforts during the last 30 years, it has been the leader of economic defense thinking for thousands of regular and reserve officers of the military establishment as well as for thousands of key professional and civilian leaders.

USMC



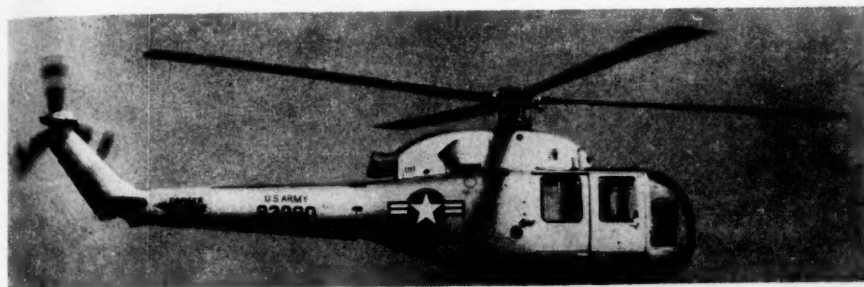
# in brief



The Army is presently testing the largest and heaviest of the tank family—a self propelled 155mm Howitzer (right). A hydrospring power-rammer guarantees consistent accuracy in ramming and makes possible a more rapid rate of fire. It employs a new type elevating and traversing system with which the gun can be elevated at several times the rate of the howitzers in its class. The vehicle is also capable of traversing almost any type of terrain.

The XH-39 Sikorski Helicopter (below) recently set a new world's record for helicopters by flying at 156.005 miles per hour. The previous record was 147.735 mph.

Britain's famous Guardsmen (see *The Guards*, page 32) have finally called for police protection against overeager cameramen and tourists. Bobbies have been assigned to keep sightseers a safe distance away from the Guardsmen at Buckingham Palace. And Guardsmen no longer have to salute all men wearing a derby and carrying an umbrella—the traditional off-duty uniform of a Guards officer.

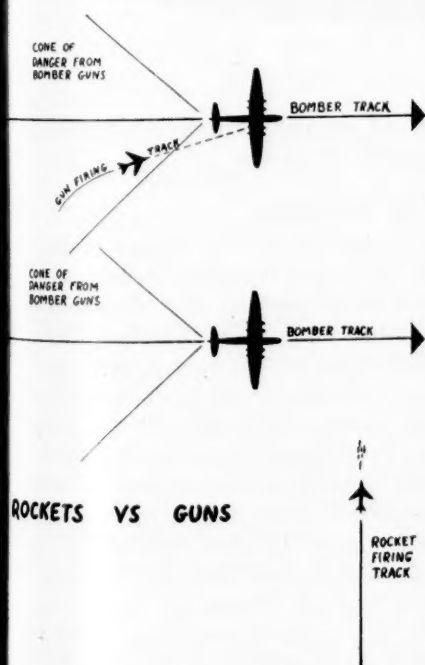


The Navy is currently experimenting with a possible replacement for the old type copper projectile band. The type rotating band being tested is of nylon plastic.

The Sea Dart, the Navy's delta wing jet fighter that incorporates the revolutionary hydro-ski for water takeoffs and landings (see *A Clean Dish for a Fast Wallop*, page 20), has exceeded the speed of sound in tests held recently. This is one of the most advanced experimental efforts of Naval Aviation to eliminate the requirement for special landing strips and carrier decks.

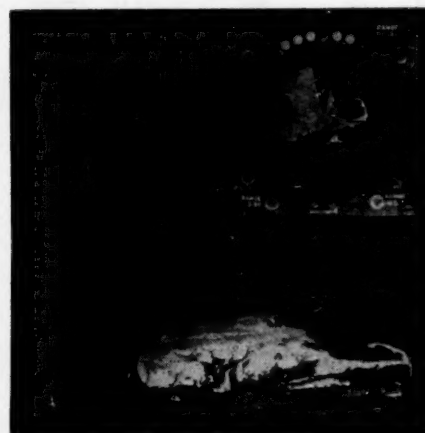
Canned bread, as fresh as off the grocer's shelf, will be included in the group 5-in-one combat rations scheduled for issue this winter.

A new, compact, airborne radar that assures greater safety for troop carrying and cargo planes, has been developed by Sperry Gyroscope Company. The new device is capable of accurate navigation over uncharted airplanes, detection of distant storms and best weather routes, anti-collision warning of mountain tops and tall structures, or of other nearby aircraft. Below is an artist's conception of what the "turtle shell" antenna sees on the surface. The area depicted is the familiar outline of the region near Cape Cod, Mass.



The Air Force has been testing a new fire control system for fighter planes utilizing electronically fired rockets instead of guns (left). The fighter, making a pass with guns at a well defended bomber, must enter the deadly cone of fire from the enemy's tail guns. But with rockets fired electronically by the new fire control system, it is a different story. The fighter makes a side approach, forcing the bomber to defend itself in crosswind on a target rapidly changing its angle of approach as it closes in.

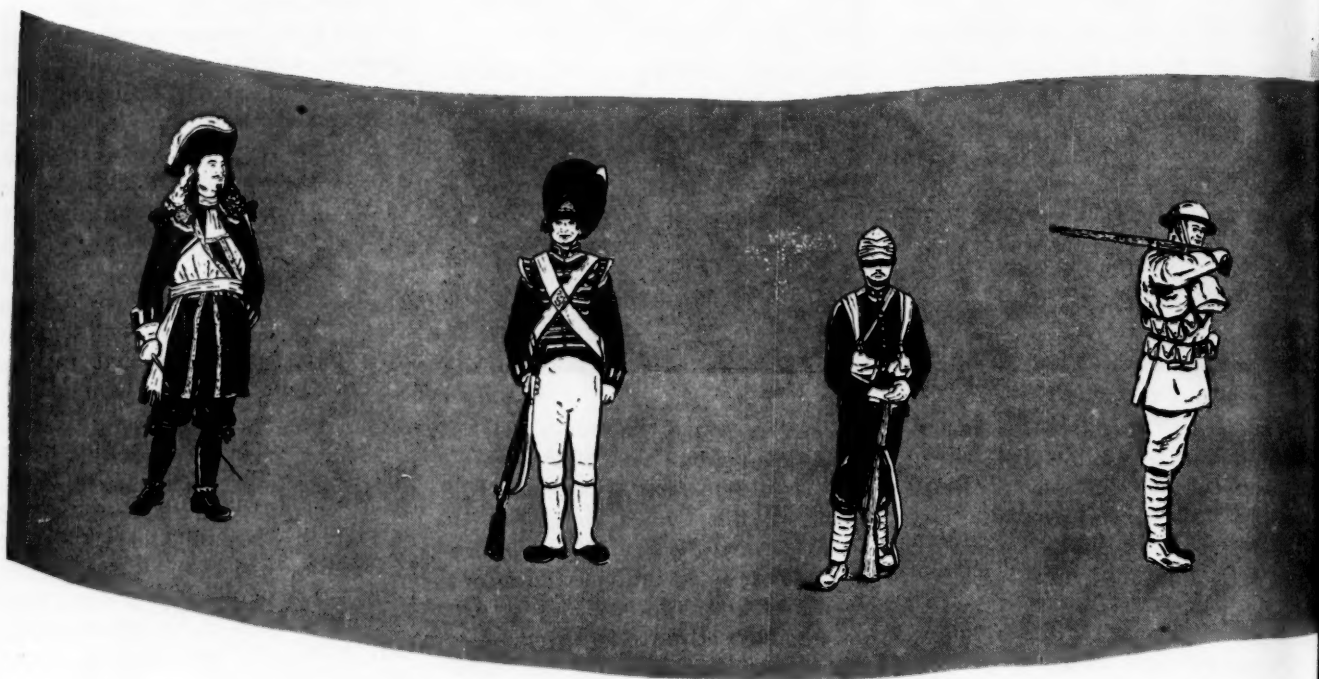
The British Sten gun will soon be replaced by "the Patchett gun" throughout the British Army.





Every country has its "Corps d'elite" — as capable on the  
battlefield as on the parade ground. In Britain it's . . .

# THE GUARDS



✠ EVERY COUNTRY HAS ITS "CORPS d'elite," acknowledged as supreme in war and peace, on the field of battle as well as on the parade ground. In the United States, it is the Marines, in Britain it is the Guards.

The Guards are the Sovereign's personal troops with the privilege and duty of protecting the Royal Person and Property. They have carried out this duty since 1660, when it was a very necessary and full time task. However, that has not prevented them from taking part in almost every campaign fought by the British Army in the 300 years since. Their reputation comes not from privilege, but has been estab-

lished on the battlefield until it is beyond all doubt.

## The Regiments

There are ten battalions of Foot Guards. The two English Regiments are the Grenadier and Coldstream Guards, each with three battalions; then there are the Scots Guards with two battalions, and to complete the representation of the British Isles, we have the Irish and Welsh Guards, who each have one battalion only. Together, these Regiments form the Brigade of Guards, which has its headquarters in the Horse Guards building off Whitehall. From here there is a clear view across St. James Park to Buckingham Palace, where



L. PREUDHOMME

By Major Julian Paget,  
Coldstream Guards



Bettmann

### *Crimea: the Russians had their fill of bearskin caps*

flies the Standard of their Colonel in Chief, Her Majesty the Queen.

The Regiments were not all formed at the same time. The two senior ones are the Grenadiers and the Coldstream (who should never be called the Coldstreams!), but there is perpetual rivalry between them as to which is the older.

The Coldstream were formed in 1650 as a part of Oliver Cromwell's New Model Army, but they did not become a Regiment of Foot Guards until 1660, when King Charles II was restored to the throne of England. Although as part of the Cromwellian forces the Coldstream fought against the Royalists, they later played a prominent part in the Restoration. In 1660, when the Government had become very corrupt and the country longed for the return of the King again, the Regiment marched all the way from the little village of Coldstream on the Scottish border down to London, deposed the Government and demanded the return of the King.

Charles returned from his exile in Holland and brought with him some Royalist troops raised there in 1656. He now created them as his First Guards and they later became known as the Grenadier Guards. The Coldstream, so named from their historic march from that village, were appointed the Second Guards, but they expressed their views on this point by taking as their Regimental Motto 'Nulli Secundus' or 'Second to None.'

There the matter has remained and seems likely to remain in the future.

In 1707, the year of the Union with Scotland, the Scots Guards were created. Being the junior Regiment by some 50 years, they were promptly nicknamed "The Kiddies," and are still so called some 250 years later. This Regiment also claims seniority, tracing their roots as far back as 1642, when the Duke of Argyll was ordered by Charles I to raise a Scottish Regiment to quell a rebellion in Ireland.

The Irish Guards were formed in 1900, as recognition for the services of the Irish troops in the Boer War, and the Welsh Guards were created in 1915.

### **History**

The names of those engagements for which Regiments are officially awarded "battle honors" are inscribed on the Colors, but that does not, of course, cover all the battles in which they have fought. The Coldstream, for instance, have 78 battles to their credit, reckoned to be the highest total of any unit in the British Army.

In 1664, the Coldstream fought on board ship and so can claim to be the forerunners of the Royal Marines! In the same year, they also formed part of the expedition which sailed to North America and, under the command of a Guards officer, captured New Amsterdam from the Dutch and renamed it New York.

A Guards officer, General Edward

Braddock commanded the Expeditionary Force against the French in North America in 1754, and on his staff was an officer named Colonel George Washington. Later, a composite Guards battalion formed from the three Regiments discovered Colonel Washington's qualities as an opposing General in the War of Independence.

The Guards fought throughout the Napoleonic Wars, in Egypt, Spain and Flanders and, at the finish, they were well represented at the Battle of Waterloo. There it was that the First Guards won the title of Grenadier Guards for capturing the Grenadiers of Napoleon's Imperial Guard. The Coldstream also distinguished themselves by their fine defense of the key point of



### *1882: the Scots Guards*

Hougemont Farm against fierce attacks all day long by superior French forces. That battle is also the occasion when the Iron Duke is reputed to have given the famous order, "Up, Guards, and at 'em."

In the next 100 years, the Guards fought in the Crimea, Egypt, Zululand and the Boer War. In the First World War, a Guards Division was formed and served throughout in France. They earned the nickname of "The Plumbers," because whenever things became critical, it seemed the Guards Division was sent for to plug the hole and restore the situation. This nickname was revived in the last war when there was no Guards Infantry Division, but sever-



al Independent Guards Brigades.

A Guards Brigade fought in France (1939-40), and a typical incident proved the tradition of the Guards. In the confusion of Dunkirk in 1940, there appeared among the stragglers (many of whom had even thrown away their rifles) a Guards battalion which had fought a fierce withdrawal action all the way back from Belgium. They still had all their weapons and equipment and marched smartly and steadily down the beach, rifles sloped and ranks carefully dressed as if on a training march in England. It was, in fact, but a repetition of an incident in the retreat of Corunna, in Spain, 140 years before, when Sir John Moore, seeing just such a sight amid the demoralized remnants of

Division led the British thrust to liberate Brussels, advancing 95 miles in one day, the longest advance ever made in 24 hours. A few weeks later, they continued the advance towards Arnhem and shared, with the U.S. 82nd Airborne Division, in the capture of the Nijmegen Bridge, prior to the unsuccessful attempts to reach the British 1st Airborne Division, cut off at Arnhem.

Ever since 1945, Guards battalions have been almost continually overseas on active service. Three battalions were in Palestine throughout the troubles there, and a Guards Brigade fought the bandits in Malaya for two years. At the present time, there are four battalions in the Middle East (Canal Zone) three in Germany and three in England. A Guards Parachute Company has also been formed of men from all five Regiments, and that too, is now stationed in the Middle East.

#### Training a Guardsman

There is one common basis for the high standards of the Guards in both peace and war. That is discipline and morale. Both these qualities come only from intensive training, mental and physical. Let us look at the methods which produce a Guardsman.

The only special requirements for recruits is physical fitness and a minimum height of five-feet-eight, which does not apply to officers. The men come from all over the British Isles, from city and from

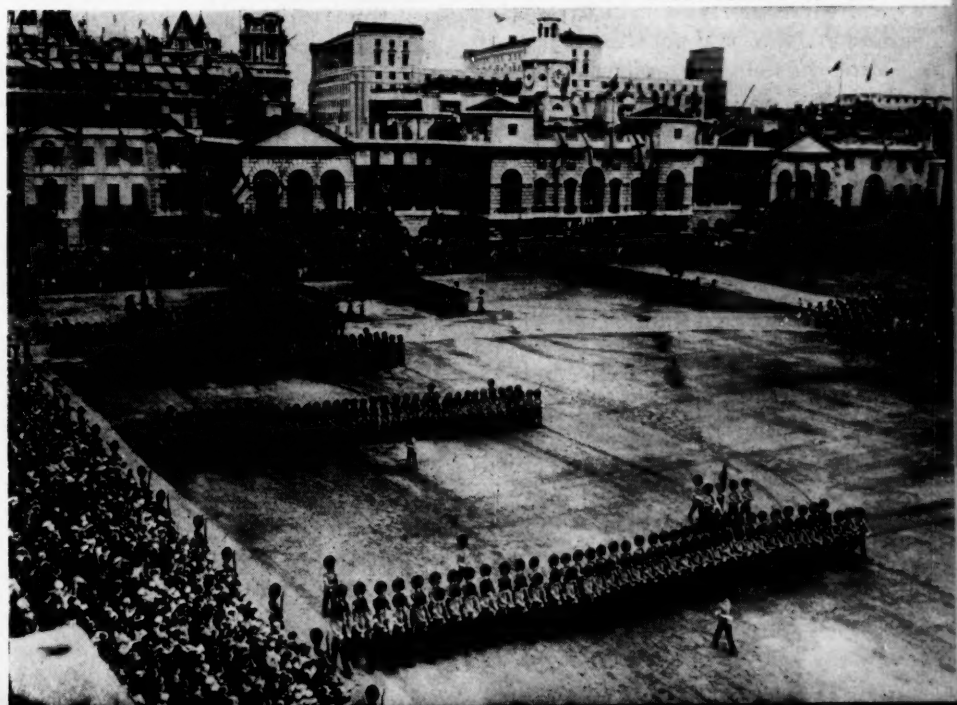
country, and many come from families where one or two generations before them have proudly served in the same Regiment. It sometimes happens that Guardsmen find themselves serving under officers whose fathers had led their fathers a generation before.

Once enlisted, the recruit is sent to the Guards Depot at Caterham, Surrey where he will undergo the hardest part of all his training, the process of being changed from a civilian to a Guardsman. It is a very strenuous and exacting course of 12 weeks, carefully designed to test men to the full and to train them at the same time. The technique is proved by the results, for at the end of this period, the man not only has a sense of considerable relief, but also of great achievement. He knows that he is trained in drill and turnout as no other troops in the British Army. That is the first and most important step in establishing that pride and confidence essential to the spirit of a Guardsman.

On arrival, recruits are assigned to companies according to the Regiment in which they are going to serve, and so they join at once the close family in which they will remain throughout their time in the Army. At first, the "family" may seem a trifle unfriendly, for the new arrivals are kept very much on the run every moment of the day, learning the hard way, but learning all the time. Life at the Depot consists primarily of drill, every single

#### The Trooping of the Color: intricate, exacting and arduous

Underwood & Underwood



his army, remarked quite correctly, "Those must be the Guards."

In the North Africa campaign, there was a Guards Brigade with the Eighth Army and they were among those who broke out of encircled Tobruk. Another Guards Brigade fought with the First Army and they both continued from North Africa up through Italy.

Although there was no infantry division organized in World War II, a Guards Armored Division and a Heavy Tank Brigade were formed, despite the problem of squeezing hefty six-foot Guardsmen into tanks. Both units were in action in Normandy and in the breakout from the Seine. The Guards Armored

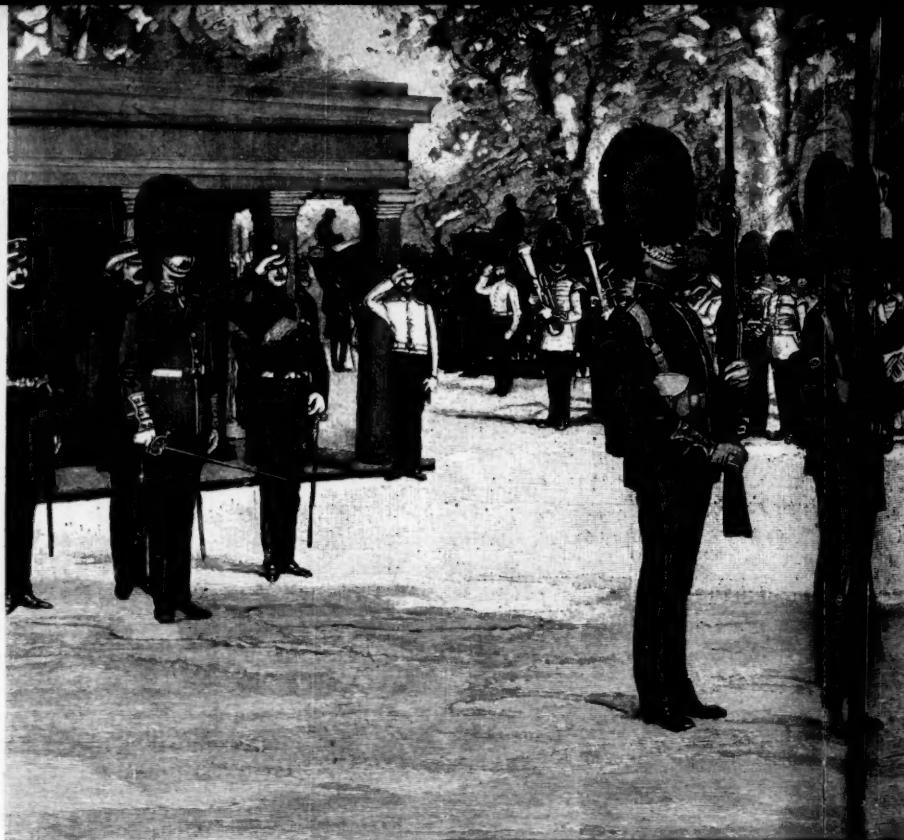
movement being broken down and practiced by the numbers over and over again under the ruthless eye and scathing tongue of Drill Sergeants (who allow not the tiniest error to pass without withering comment). A man's every ounce of effort has to go into each move in order to satisfy them. As in drill, so in turn-out, perfection is the only standard accepted. Every week and every day there are dreaded inspections where the most minute detail, such as a bootlace out of place, is sufficient to earn a man an extra drill parade.

Even off the parade ground there is no time for relaxation, except for quick dashes to the canteen for cups of tea (the drink without which it seems the British Army could hardly function). In the barrack room every spare moment is devoted to "spit and polish" under the tuition of an old soldier, called the "trained soldier." This old timer knows all the tricks of the trade, from burning the toecap of a boot to improve the shine to putting soap inside the crease of one's trousers to get a real edge to it and make it stay.

Every moment too, the recruit is imbued with pride in his Regiment. He learns it from his officers, instructors and from his surroundings, for all around he will see evidence of the achievements of previous generations of Guardsmen. Even when he has a brief "Stand Easy" on the parade ground, he will be quizzed on the history and traditions of his Regiment; its battle honors, its customs, the Victoria Crosses it has won, its famous officers and men, and all those tales, which together make the would-be Guardsman realize the selfless standards that are expected of him if he is to maintain the traditions already established.

All officers, too, are put through this same course at the Depot, and though they are kept together in an Officers' Squad, they undergo the same rigorous program, including taking their turns at sentry go and swabbing the latrines and barrack room floors.

The recruit is not allowed outside the barracks until after his fourth week, for until then he is not considered fit to appear in public as a Guardsman. After his 12 weeks at the Depot he is entitled to call him-



Underwood & Underwood

self a Guardsman. He then goes to the Guards Training Battalion at Pirbright, Surrey. There, officers and men of all five Regiments learn their field training, qualify on the ranges and study specialist trades, such as drivers and signalers. And of course, the drill continues but with the emphasis on unit and ceremonial drill instead of individual instruction. From there, men are sent to the active service battalions of their Regiments at home or abroad, ready and trained for a ceremony or action.

#### Home Service

Although the present is theoretically peacetime, seven out of the ten battalions of the Brigade of Guards are now abroad. Even for the Coronation, which meant so many extra duties for the Household Troops, only a little more than two battalions were allowed home.

Those battalions doing duty in London are still allowed to wear their pre-war full dress, and it is part of the pageantry of the capital to see the tall bearskin caps, scarlet tunics and white belts of the sentry outside Buckingham Palace and St. James Palace.

Until the Second World War, every officer and man had his own







Bettmann



complete uniform. Officers had to buy their own, which cost up to \$1,700; now it would cost nearer \$3,000 and very few officers could ever afford it, even if the material were available. So, in order to continue the wearing of full dress, each Regiment carries a stock of uniforms and equipment in the Regimental Store, from which officers and men doing London duty borrow all they need.

All five Regiments wear the same basic uniform of a black bearskin cap (not a busby which is a different headdress!), scarlet tunic and dark blue trousers with a red stripe. Although the Regiments look very much alike on parade, it is possible to distinguish between them by looking at two points: the buttons down the front of the tunic and the plume on the side of the bearskin.

The buttons are grouped according to the seniority of the Regiment; the Grenadiers wear theirs singly and the Coldstream in pairs; the Scots Guards wear them in threes, the Irish in two groups of four and the Welsh in fives.

The plumes are equally distinctive. The Grenadiers wear a white plume on the left of the bearskin and the Coldstream a red one on the right. This is not just perverseness

on the part of the latter, but is for a very good reason, dating back to the times when the bearskin was worn in battle. The Grenadiers always stood on the right of "the thin red line" and the Coldstream on the left. It will be seen, therefore, that their plumes both faced inwards so that the General commanding the troops and standing out in front could spot the plumes and see where each Regiment was. The Scots Guards, the only other Guards Regiment formed at that time, held the center of the line and so did not, and still do not wear any plume at all.

The Irish Guards have a green plume on the right of their bearskin and the Welsh a green and white one on the left.

Guardsmen not in London wear the same battle dress that the rest of the British Army wears, but they have a distinctive feature still, in that they wear a peaked cap instead of a beret. All battalions have to be prepared to change at very short notice from battle dress to full dress or vice versa. One Guards battalion was in London in May 1949 and was ordered to Malaya, where it arrived in October. On their return, two years later, they mounted Guard at Buckingham Palace in full dress within a few days of finishing their Disembarkation Leave.

The routine duties of the Guards in London are the guarding of the Royal Residences and the provision of Guards of Honor as required. For this, a minimum of two battalions is required and one of them is always stationed at Wellington Barracks, just opposite Buckingham Palace.

The Changing of the Guard at Buckingham Palace takes place every other day and is one of the well-known sights for visitors to the capital. It is a purely ceremonial guard, since the sentries have no ammunition for their rifles. Many are the discomforts and indignities they have to endure from the crowd while standing motionless at their post. Their restraint was proved one day last summer when a boy of about 12 watched the sentry incredibly for some minutes and then with a cry of "I'll see if he's real," kicked him so hard on the shin that he drew blood. The Guardsman never



quivered, but his thought must certainly have been unprintable!

A guard is also mounted at the Tower of London and at Windsor Castle.

Another traditional guard is a small picket of one officer and 24 men, which mounts every night on the Bank of England in Threadneedle Street. Scotland Yard and

#### State Occasions

On State occasions such as the State Opening of Parliament or an official visit by some foreign ruler or head of state, a Guard of Honor will be provided by the Brigade of Guards.

At the Coronation, Guards of Honor were provided by each of the services outside both Buckingham

Grenadier Guards. They are the First Company of the First Battalion of the First Guards, and every man in it must be six foot, two inches tall. In accordance with a long established tradition, they are on duty actually in the Abbey on Coronation Day. Among other privileges granted to them is that of guarding the body of the Sovereign on His or Her death and of providing the bearer parties at the funeral. The Queen's Company have their own Color, the Queen's Color, which is presented to them by each Sovereign.



**Welsh Guards: the buttons and plumes identify them**

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numerous electronic devices provide the real protection for the nation's diminished stocks of gold, but the Bank still pays for its guards, 2 shillings (28 cents) for the Sergeant and one shilling for each Guardsman. For the officer of the Guard, they provide supper, with a bottle of wine for himself and one guest—but they specify that the guest must be male!

Palace and Westminster Abbey and, in each case, the Army was represented by the Guards. They also exercised their privilege of lining the processional route along the Mall and two composite battalions, representing each of the Guards battalions, marched in the procession.

A special duty fell on this occasion to the Queen's Company of the



**Caterham, Surrey: perfection**

is carried by them throughout the reign and is then buried with the Sovereign.

The Headquarters of the Brigade of Guards is responsible for the staff work and organization of most of the ceremonial occasions in the capital (they planned much of the Coronation). The Guards also drilled all the contingents of troops from the Commonwealth who marched in the Procession.

Once a year, on the Queen's Official Birthday, the Guards pay their homage to their Colonel in Chief at the Queen's Birthday Parade.

Marine Corps Gazette • October, 1954

more popularly known as the "Trooping the Color." Its origin dates back to the days when it was considered necessary to show the consecrated colors to the troops periodically, to remind them of the duty they owed to God and to their country.

This is one of the finest ceremonial parades in the world, with perfect precision of drill and stirring pageantry. There are over 800 Guardsmen on parade, as well as their massed bands, some 350 strong. The Household Cavalry, composed

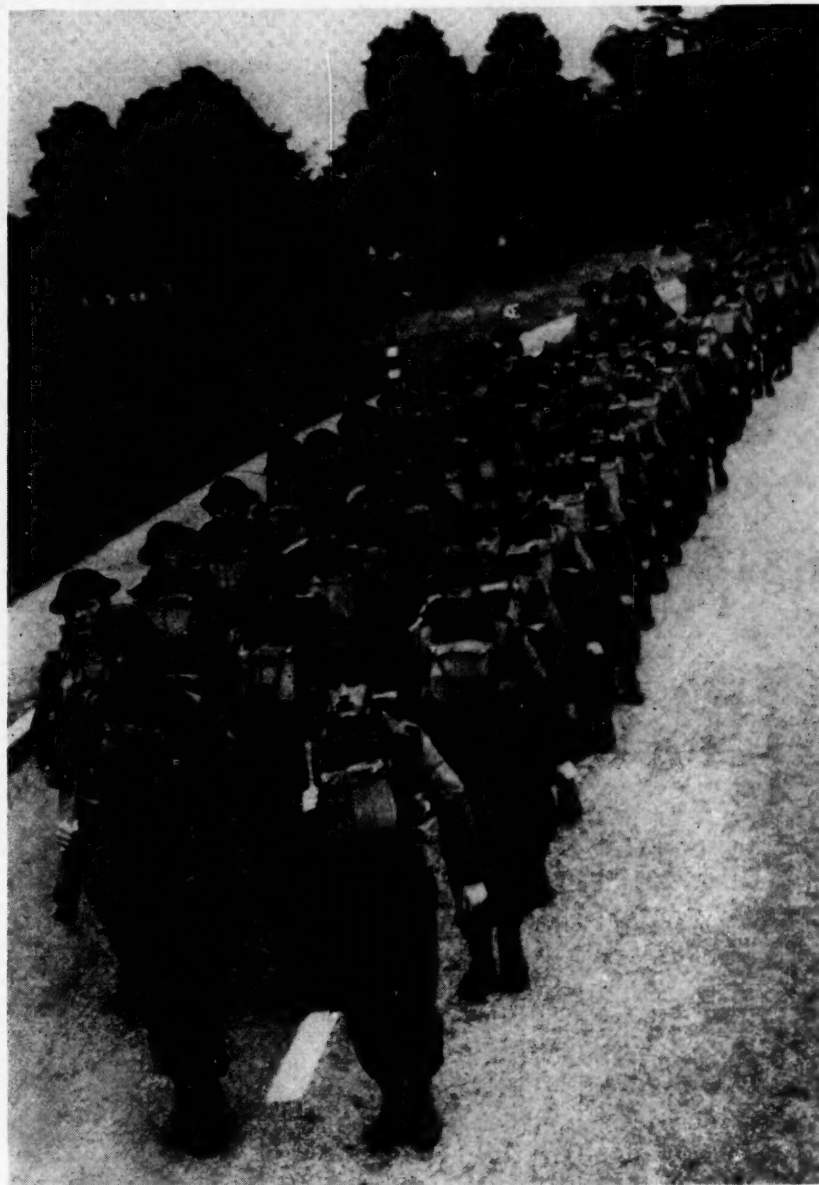
shoulders without moving from their position of Attention, until he recovered and could finish the parade without the disgrace of falling out.

### Conclusion

It is neither chance nor privilege that has gained the Guards their

man soon learns what is expected of him by his comrades and by his Regiment.

From this enforced discipline springs that much more elusive quality, self-discipline. That is the force which makes men achieve great things and be proud to do so, not for themselves, but for the sake



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**In full dress or battle dress: the same distinctive appearance**

great reputation. It is the result of a tradition built up over centuries, and that tradition is *discipline*.

First, it is the discipline imposed from without by insistence on the very highest standards at all times, be it faultless drill or perfection at turnout, smartness and behavior both on and off duty. In this way, a

of their comrades and the honor of their Regiment and their Country.

A Guardsman possesses this discipline and is proud enough of being a Guardsman never to lower the high standards demanded by his Regiment. That is how traditions are built up and maintained through the centuries.

USMC



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**expected standard**

of the Royal Horse Guards and the Life Guards, also parade and march past with shining cuirasses and waving plumes to the music of their own mounted band.

It is a most intricate and exacting parade, very arduous for those taking part, requiring at one stage that all troops stand motionless at Attention for 19 minutes. Yet on one particularly hot occasion, when over 850 spectators collapsed, only three Guardsmen fell out. In fact, it has occurred that a fainting man has been held up by the men on either side of him just pressing against his





For 80 years the intermediate automatic received only passing notice. Then the Germans started an international development race that's still going

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# INTERMEDIATE AUTOMATICS

By Roger Marsh

THE INTERMEDIATE AUTOMATIC is just that—a weapon between pistols and pistol-caliber submachine guns on the one hand and high-power rifles on the other.

Ease-of-handling requirements of service use impose weight limitations on the arm, and the combination of these, in turn, imposes limitations on the power of the ammunition to be fired (optionally full-automatic) in the gun. The addition of a muzzle brake offers a solution only on paper—on a gun, muzzle brakes increase the unpleasant effects of muzzle blast on the firer and on personnel near him. Muzzle brakes also vastly complicate the problem of providing muzzle attachments (e.g., grenade launchers) for the gun.

This class of weapons has been investigated by gun designers since the early 1880s. It was given only the slightest passing notice during World War I, but immediately thereafter one of the most interesting arms of the type was brought out. The Germans undertook the development of an arm of this type just before World War II, and our own carbine (M2) offers one of the less satisfactory examples of the class. The great Finnish designer Lahti introduced a unique weapon of the type in 1944, and since World War II, the British have adopted as their service rifle an arm which represents probably the most advanced form of intermediate automatic produced to date.

It seems appropriate that Sir Hiram Maxim was the first to investigate this type of weapon. Patent records in many countries (including our own) disclose that gun de-

signers since 1883 owe an unacknowledged debt to Sir Hiram; he foresaw and patented virtually every type and system of automatic gun. Sir Hiram never missed a chance to blow his own horn, but the patent records represent fact uncolored by fancy and they show that he didn't miss a trick.

Maxim's "intermediate" was possibly the first or second automatic shoulder weapon ever built. Patented June 9, 1885 as U. S. number 319,595 it had previously been patented in Britain and France in 1883 and in Belgium in 1884, which certainly seems to indicate that it had a priority!

The arm was a straight-blowback shoulder arm firing a cartridge of very modern type—rimless and slightly bottlenecked. (I have never seen a sample of this ammunition; if a few of these cartridges remain, they must be extremely rare.) It was fed from an eight-round, indexing, compartmented drum, which was rotated by a cam lug on the bolt riding a cam groove in the magazine rotor. The bolt was returned by a recoil spring mounted in the butt, which is a feature much used since.

The weapon was hammer-fired and the firing mechanism included no disconnecter. It had double sears, one of which was operated by the trigger, the other by the bolt. If you held back on the trigger, the bolt tripped its sear every time it returned forward, firing the gun. The arm was thus full-automatic for eight rounds.

An interesting semi-automatic mechanism was provided. A latch dog, mounted in the bolt, could drop into a recess in the receiver wall when the bolt had fully recoiled. When the firing switch was turned forward, part of its spindle blocked the recess, and the bolt reciprocated freely. But when the switch was turned back, it cleared the recess and the bolt was caught back on each shot. The firer then had to press the firing switch to let the bolt go forward again.

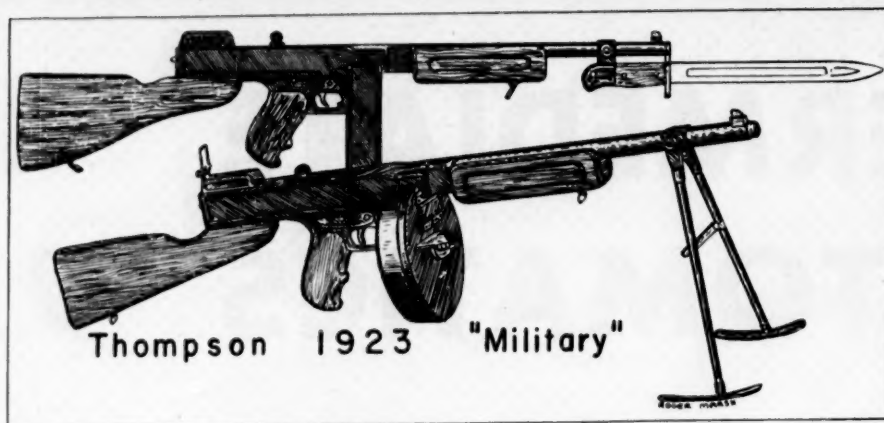
Incidentally, this arm had an external cocking lever attached to the protruding end of the hammer spindle.

An examination of the drawings accompanying various patents on this arm makes it clear that it was probably a true intermediate. The blowback bolt is not particularly massive and no auxiliary locking or delaying device is visible. Further, the arm is quite light and, as noted, could fire fully automatic. All this makes it clear that the ammunition was probably not elephant-gun stuff.

Here, then, was the first of the class.

In the succeeding three decades—particularly in the years from 1899 on—a number of sporting rifles of various calibers appeared. Many of these had "intermediate" characteristics, but none was full-automatic. It is true that the Winchester Model 1907 self-loading rifle in caliber .351 WSL was used by the "Air Service of the U. S. Army" as an auxiliary aircraft weapon (and appeared in official manuals of the period), but it was semi-auto only.

The National Matches at Camp



**TSMG — a 14½-inch barrel and a bayonet**

Perry in 1920 saw the first appearance of the Thompson submachine gun. Soon this arm had been standardized (as the Model 1921) and two special models of 1923 were produced to use not only the line of .45 ACP ball (and shot) loads, but also a special long .45 which came to be known as the ".45 Remington-Thompson Military." This cartridge delivered a 250-grain bullet at 1,450 f/s, which moved the Thompson up into the intermediate class.

The 1923 Military model had a 14½-inch barrel (the short model had the regular 10½-inch barrel) and was fitted to take a bayonet and bipod. With bipod it weighed 12 pounds. The arm was not a financial success. The 1923 Models were not materially different mechanically from the standard models: it is probable that if Thomas Fortune Ryan (Auto-Ordnance's bankroller) had not died in 1928, throwing the company into the hands of the Guaranty Trust Company and the pacifist Elihu Root, the firm would have gone on to exploit the opportunities offered by the Chaco War and various other minor disturbances of the late 20s and 30s, and the "Military" might well have been revived.

As things worked out, however, the company virtually went into mothballs until its purchase by J. Russell Maguire in 1939. As Auto-Ordnance Division of Maguire Industries, the firm produced many of the various Thompson SMGs used during World War II.

Its other shot at the "intermediate" field, a Grant Hammond-designed entry in the carbine competitions, was a failure.

But while Auto-Ordnance was dormant, the Germans were active. They started work in 1934 on an intermediate cartridge, using (according to Phil Sharpe) a German sporting round known as the 8 x 46 + rimless. It was a bottlenecked, 8mm cartridge with a case 46mm long. Sharpe records that this was succeeded in 1935 by the Winters Experimental, similar to the 8 x 46 with a case only 36.5mm long.

Another cartridge of this period was the 8 x 40, also a rimless bottleneck. Velocities ran around 2,500 f/s with a 148-grain bullet. Development work was then (in the late '30s) taken up by the Polte firm which, in early 1940, brought out an 8 x 30 cartridge with a 106-grain bullet at around 2,500 f/s. This was followed by the final 7.9mm cartridge with 33mm rimless, bottlenecked case which was standardized in 1942 and later designated *Pistolenmunition*.

The standard projectile weighed about 126 grains and muzzle velocity was around 2,300 f/s — quite respectable!

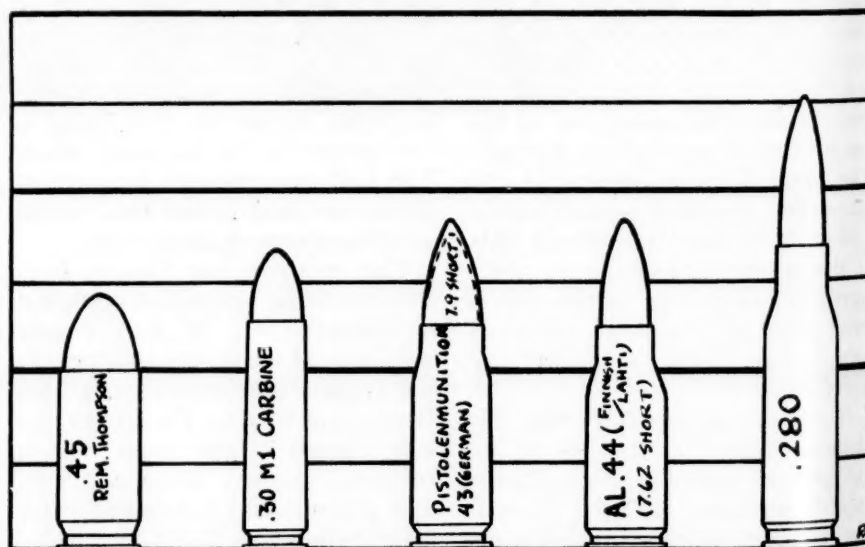
The practice of putting a cartridge into production before there is a gun to handle it is not uncommon. Walther and Haenel were asked to develop arms to use the new 7.9mm short cartridge.

The Walther entry was, to put it bluntly, a dog.

The Haenel entry was very different. In the first place, unlike the Walther, it was cocked with the bolt open — a slam-firer in other words — and its gas system was the familiar cylinder-and-piston type. The MKb42(h), as it was known, used a tilting-bolt locking system in which the rear end of the bolt was cammed down in front of a locking shoulder in the receiver, the operating slide continuing forward to fire the arm and then being driven back to unlock and retract the bolt.

The operating handle of the MKb42(h) ran in a slot in the left side of the receiver. It was so mounted on the operating rod that it could be pulled back and swung up into a safety notch, thus locking the action open. The operating slide was driven forward by a recoil spring in a telescoping housing which closely resembled the similar component in the MP38 and MP40. This, together with the Schmeisser-like safety system, shows that the Haenel engineers were doing their best to produce an arm whose operation, so far as the firer was con-

### **Ammo — sometimes the cart comes before the horse**



cerned, would resemble that of the standard German SMG of the day.

The arm weighted about 11 pounds and was less than 37 inches over all with 16¼-inch barrel. It was the immediate ancestor of the now-famous MP43 series.

Meanwhile, things had been happening in the United States.

IN 1940 THE ORDNANCE DEPARTMENT—now the Ordnance Corps—was directed to develop a weapon weighing less than five pounds complete, having an effective range of 300 yards and being fitted with a sling.

The existing cartridges—.30 rifle and .45 auto—were obviously out of the picture; the total weight was too light to permit satisfactory use of the rifle cartridge and the pistol cartridge was, at the maximum ranges required, not sufficiently dependable or effective. Ordnance, therefore, got together with Winchester and undertook to develop an adequate carbine cartridge on the basis provided by the old .32 Winchester Self-Loading cartridge, which had been determined (by what process of divination is not clear) to offer the greatest promise.

In retrospect, the various decisions and revisions of decisions which resulted in the adoption of the M1 carbine seem strange indeed.

The cartridge chosen as a basis for development was an item which, even with a heavy expanding bullet, had long since been condemned as inadequate for anything except medium game, and whose rifle had been dropped in 1920. The carbine cartridge, developed from it, got about 600 f/s more muzzle velocity (about 2,000 f/s), but paid for it with a much lighter full-metal-jacket bullet.

Original requirements for the arm included maximum magazine capacities of 50 rounds and selective (full-auto or semi-auto) firing mechanism. The full-auto feature could have made up for some of the inadequacy of the cartridge, but it was immediately dropped when the first tests disclosed that accuracy at 100 yards suffered in full-auto fire! With the elimination of the full-auto requirement, maximum magazine capacity requirements were dropped



*Carbine—compromises made it a dodo*

to only 20 rounds—and the final winner had magazine capacities of only 15 rounds.

So the carbine did not become a true intermediate, in spite of its adoption late in 1941, until the appearance of the M2 full-automatic carbine fully three years later. By late 1944, field experience had demonstrated only too graphically that machine fire and large-capacity magazines are vital.

The carbine is, without doubt, sufficiently well known that there is no need to expend space on it here. Since its elimination from the USMC arsenal, it remains of interest largely as a reason for speculation on just how things might have worked out if the cartridge chosen as a model had been the .351 WSL (180-grain bullet at 1,800 f/s) and if no compromises on selective fire and magazine capacities had been made.

On the other hand, as we have seen, the Germans had no illusions about replacing their pistols with a shoulder arm. They were out to develop a weapon of maximum effectiveness and stability and flexibility in use, not to make as small

an arm as possible. The arm which they did produce from the experimental MKb42(h) was the MP43.

Unlike the MKb42(h), the MP43 was cocked with the bolt closed; the arm had an internal-hammer firing mechanism. It could fire full-auto or semi-auto—a “push-through” fire selector button was provided. The MKb42(h) had had an extension of its gas tube carried from the gas bracket forward to the front sight (presumably to support the barrel, since both of the MKb42 types were designed to use the 1898 bayonet—this was eliminated in the MP43. Like the MKb42 guns, the MP43 had its sights set very high on the arm. An ejection port cover was provided which automatically snapped open as soon as the bolt was moved.

The MP43/1 was apparently a transition model. It differed from the MP43 only in having an unstepped barrel and a rather massive front sight mount set back more than normal from the muzzle. It also had a longer than usual muzzle thread protector. Apparently, this version of the arm caused difficulties in the use of various muzzle at-

*Experimental—it fathered the MP43*



**MKb42(h)**





*We ran into a first class weapon on the battlefield*

tachments such as the *Schiessbecher*, because it was replaced by the MP44, in which the front sight mount was trimmed to size and moved forward again, the front end of the barrel being reduced in diameter at the same time.

According to German handbooks, the MP44 weighed 10.2 pounds with empty magazine and sling. (Filled, the 30-round box magazine weighed approximately two pounds.) It is, reportedly, a remarkably pleasant gun to shoot, surprisingly accurate and extremely powerful. Its 16 1/4-inch barrel gives velocities in the vicinity of 2,300 f/s with the standard 126-grain projectile.

One variant form of the weapon is known—probably experimental, since it carried no designation beyond some numbers including a marking interpreted as “V-9”—in which the front sight was made integral with the gas bracket (its place near the muzzle being taken by a short block to permit attachment of muzzle devices). The rear sight was moved back a corresponding distance. The open operation handle slot of the standard guns was partially closed, and the remaining portion was sealed with a cover of sorts.

The StG44 (or perhaps the improved experimental just described) might, had the war continued for any considerable period of time after 1944, have become the basic infantry weapon, but the steady deterioration of German fortunes through

the winter of 1944-45 made this no more than an interesting subject for speculation.

Though the StG44 made one post-war appearance—in a newsphoto of Czech security troops—for all practical purposes the German intermediate automatics died with the collapse of the Third Reich.

✻ I HAVE RECENTLY seen a handbook apparently issued by the “Instituto Nacional de Industria” announcing its “Spanish Sub-machine-gun C.E.T.M.E. Model.” As de-

scribed, it seems an interesting arm: 38 inches overall with a 17-inch barrel, it weighs nine pounds without magazine, but with bipod. The bipod, folded, serves as a handguard . . . but it is a delayed-blowback type. Locking rollers in the separate bolt head tend to ride out of their locking seats in the barrel extension under back pressure from the propellant gases. But they must first shove back most of the bolt mass, thus effectively slowing down unlocking. Cyclic rate is listed at 550 rds/m; magazine capacities are 20 and 32 rounds. Reportedly, the arm can fire AT grenades, using special ammunition and attachments.

The ammunition, however, is unconventional. The short, rimless, bottlenecked case carries a caliber .30 (7.62 mm) bullet whose brass jacket has an “amidships” aluminum core, both ends of the jacket being left empty; the bullet therefore weighs only 105 grains (6.8 g.) for all its length of 1.73 inches. Muzzle velocity is listed at 2,700 f/s, muzzle energy 1,613 ft-lb . . . and out at 1,000 yards they claim it still has 181 ft-lb of energy left. Enough, according to the illustrations, to puncture various kinds of helmets (including Russian).

This one is certainly out of the ordinary!

#### *Acme of German war-time intermediates*



*Variant—front sight was moved*





**Germans had no illusions about replacing their pistols**

ONE OF THE MORE INTERESTING aspects of world history is the way in which one man can change the entire course of events. This was the situation when the Soviet Union invaded Finland in the "Winter War"

of 1939-40 and ran into the 9 mm sub-machine gun known as the "Suomi Pistol." The designer of this arm, Aimo Johannes Lahti, had served as a constructor of light arms in the Finnish Army since 1926—the Suomi

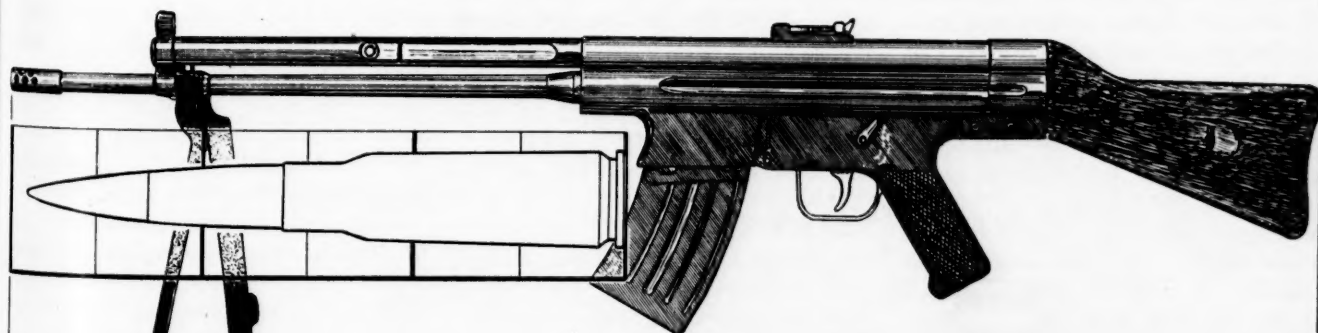
Pistol was developed around 1930—but in spite of his considerable reputation among arms experts, none of his arms had attained wide popular fame until the Russians walked in. The Russians' initial effort was stopped, literally and figuratively, cold, which certainly changed the course of Finnish history.

When, in World War II, some rather weird twists of fate lined up Russia with the United States and Finland with Germany, news of new Lahti weapons consisted of little more than rumors and whispers, but as the end of the war neared, news of a new and unique "Suomi Carbine" came out.

It is a surprisingly light weapon, weighing 9¼ pounds. Johnson and Haven (*Automatic Weapons of the World*) list the overall length as 39 inches. Two types of magazines are understood to have been provided, a 60-round drum and a 30-round box. The arm has a bipod mounted near the muzzle end of the barrel guard. The barrel may be removed in a matter of seconds by turning a thumb piece on the right side of the gun ahead of the magazine, after which the cross-key to which the thumbpiece is attached is pulled out, leaving the barrel free to be shaken out of the guard.

Details of the ammunition used are scanty, but the cartridge is a caliber 7.62mm rimless, bottlenecked round, quite similar in appearance to the German 7.92mm. The bullet is reported to weigh about 123 grains. Ballistics are uncertain, but

**Spanish version — out of the ordinary**



**C.E.T.M.E. 7.62mm. SUBMACHINE GUN**



*It "snows" the experts*

are believed to be similar to—perhaps slightly less than—those of the German round.

The arm is fitted with a fire-selector lever on the right side—of a type similar to that used on some of the experimental Suomi pistols.

This arm was first called the "Suomi Carbine." It developed, however, that the weapon had not been given this name in Finland; there it was known as the "Lahti Carbine."

To say that it was—and is—unique is to put it mildly. As a matter of fact, just how it does function is still a matter of debate. The breech mechanism consists of a heavy bolt with a swinging bolt lock mounted in its upper rear section, while an actuator—carrying the firing pin—shuttles back and fourth in the bolt body underneath the bolt lock. Movement of the actuator swings the lock to and from the locked position in which it engages a locking cross-key in the receiver.

In the forward stroke, the actuator and firing pin are held in their rearward positions in the bolt by the bolt lock until forward movement of the bolt carries it and the lock to the point where the lock can tilt up against the locking cross-key. This frees the firing pin and actuator to move forward, the

actuator jamming the lock into the locked position and the firing pin striking the primer of the cartridge.

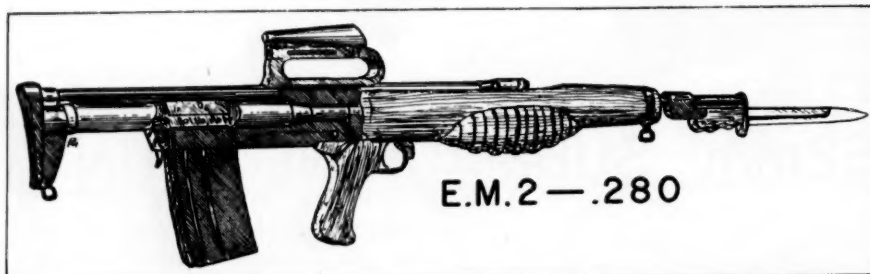
The firing pin and actuator are then moved rearward, the actuator swinging the lock out of the engagement with the locking cross-key, at which time the bolt blows back. Cyclic rate was 900-950 rds/m.

But the question is this: what moves the actuator and firing pin back? It has been suggested that Lahti used the normal rebound of moving parts to effect this movement. The required movement, however, seems much in excess of what could be hoped for from rebound alone. This leaves the rather amazing possibility that the firing pin and firing pin orifice are so shaped as to permit the primer of the cartridge to rupture and to channel propellant gases around the firing pin against the head of the actuator proper.

This particular system of actuation is not as bad as it sounds; the type of primer used in Europe has no separate anvil to gum up the works, and the fine fragments of metal from the primer cup alone could be taken care of without too much trouble.

The arm is understood to have been called the Model A-L 44.

*A chill wind blew eastward*



THAT WOULD HAVE BEEN THE end of the story, but shortly after World War II the British took stock of their arms racks and decided that it was time to modernize.

They re-examined the Sten gun, then in its fifth "Mark," and decided to replace it with the folding-stock Patchett 9 mm machine carbine, which had been knocking at the door since the early 1940s. They considered their service revolver and then turned to the Belgian Browning "Grand Puissance" 9 mm 13-shot autopistol.

Then they came to the rifle, the light machine gun and the medium machine gun, and they made a remarkable decision—they undertook to replace their rifle and LMG with an intermediate automatic. (Lahti, in describing his A-L-44 intermediate, said that it was "Developed on the basis of war-time experience and aimed to replace rifles, LMGs and machine pistols." It seems that the British took a similar view of the virtues of the class.)

The British EM-2 rifle, once adopted and then suddenly dropped as the British infantry's standard weapon, was a most interesting little weapon. Its advanced design, however, was not enough to save it when a very chill wind blew eastward across the Atlantic into Britain.

Actually the arm was a particularly fine example of the logical development of a weapon for the individual soldier. Its 7mm projectile—actually .276 but rated .280—weighed 140 grains and had a muzzle velocity of around 2,500 f/s: the bullet was ballistically excellent, perhaps even superior to that of later NATO-.30 (the US T-65 series).

The rifle itself was something less than three feet long over-all, a remarkable achievement with a 24½-inch barrel. The "bull pup" design, in which much of the action was crammed into (what in a conventional gun would have been) the buttstock, was responsible for the rifle's shortness and, in part, for its light weight—about eight pounds. This design was also responsible for making necessary the location of the 20-pound magazine behind the rear (pistol) grip. The rear sight was an optical unit set quite high above the action of the rifle, where it also did duty as a carrying handle.





*The Sten—re-examined and replaced*

In short, it was a most atypical and unconventional design, and perhaps its subsequent sudden retirement from service may be traced, at least in part, to the fact that such a weapon could scarcely expect to gain the support of traditionalists and old-line soldiers! It might be well to point out here, though, that the basic action of the arm was apparently borrowed to some extent from the Kreighoff-designed German FG-42/44 (*Fallschirmjäger Gewehr*—paratrooper rifle), while the idea of locating the magazine behind the pistol grip is found in a semi-experimental Kreighoff semi-automatic anti-tank rifle.

The design group (headed by Polish-born Kenneth Janson which, under E. H. Kent-Lemon, developed the EM-2 gun) produced a weapon of which there's no need to be ashamed. Aside from high initial production costs—inevitable in any revolutionary design such as this—the arm was a designer's dream, built around the logical necessities of design and construction rather than around a series of compromises with sentiment and prejudice.

But, unfortunately, its sponsors had the temerity to suggest that it might make a good NATO-standard rifle, and from then on its days were numbered! First to go was the fine little .280 cartridge, probably because criticism from the U. S. was initially aimed its way. It was, according to the best semi-official reports, much too weak. Its performance fell short of that of the U. S. short rifle experimental round.

Perhaps it may seem odd to define your own cartridge as perfect and then to criticize its rival as being "too weak" on the basis of your own arbitrary definition, but that's neither here nor there, now. Attempts to point out that the British round had its good points were unavailing—the British contention that you could kill a man only just so dead and no deader were dismissed—and finally, late in 1953, the NATO powers officially, freely and voluntarily adopted the U. S. short .30 cartridge as NATO standard.

This may not be the classic reward of virtue, but it shows that intransigence pays if you're big enough to back it up!

Within a matter of weeks, however, the British handed back the favor—with interest. During the period when the U. S. cartridge was obviously getting the upper hand, they had converted their EM-2 to handle the round and at the same time had been testing the Belgian Fabrique Nationale d'Armes de Guerre light rifle, designed by Dieudonné Saive, also converted to handle the short .30. When the U. S.-designed cartridge was adopted by the NATO nations, the British turned around and adopted the Belgian rifle, leaving the U. S. contender as high in the air as had been their own .280 cartridge! The Canadians have followed, and there's little doubt about what gun the Belgians will adopt.

BE THAT AS IT MAY, the picture of the true intermediate automatic should by now be fairly clear. Its

basic characteristics, again, are these: a shoulder arm of size and weight approximating those of a light military rifle; an arm able to fire full-automatic or semi-automatic and using ammunition of such power that it may be fired fully-automatic from the arm without undue disturbance of the aim and without a muzzle brake; an arm having magazine capacities large enough to make full-automatic fire worthwhile.

Our people are now engaged in the design—and limited production—of a "light rifle" to fire a cartridge reported to have much the same power as the present U. S. service rifle cartridge. The arm is to weigh slightly over eight pounds, to have adequate magazine capacity and to be capable of optional full-auto fire. The series of arms leading up to the present T-44 and T-47 goes back several years, but at the time of writing these weapons are still in what might be called "T-status." In any case, these weapons all have muzzle brakes, which (another arbitrary definition!) moves them out of the true intermediate class. (The British-Belgian rifle lacks the brake, but—remembering a man who went flat on his keester firing the 12-pound German paratroop rifle using standard 7.92mm rifle ammo—I think I'll wait a bit before accepting the reports that this nine-pound rifle is perfectly OK fired full-auto with the .30 cartridge!)

The object of all this work, of whatever time and whatever country, has been and is to produce the most and best gun within limitations imposed by service use. There seems no reason to believe that anyone ever sets out to design an inferior weapon—there are only different approaches to the problem.

Whether the true intermediate (with the limitations on the power of its ammunition which we have noted)—or some sort of "super-intermediate" (with some of the curse taken off recoil and climb by a muzzle brake)—is to be the weapon of the future is a question which only the future can answer. The "super-intermediate" seems, at the time of writing, to have the inside track . . . but whether this decision, if taken, will turn out to be a wise one—is also a question for time to answer.

USMC

# QUANTICO'SO

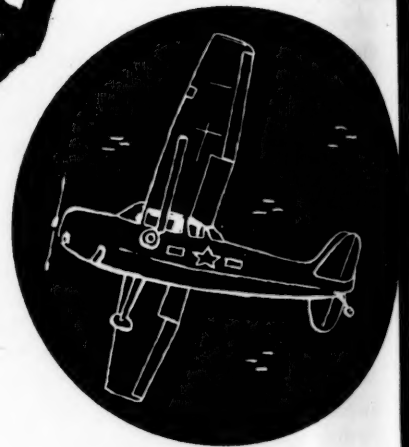
EXTENSION

COMMUNICATIONS

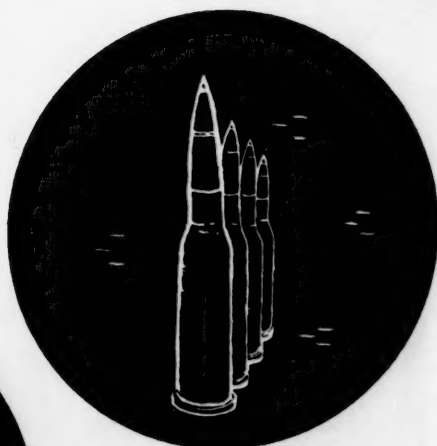
ORDNANCE

NAVAL GUNFIRE

AERIAL OBSERVATION



# OTHER SCHOOLS



By LtCol Robert W. Glickert

FOR MANY MARINES THE Marine Corps Schools, Quantico, Virginia signifies officer training as provided by the Basic, Junior and Senior Schools. The tendency to associate MCS primarily with these three units is easily understandable when one considers that these schools will be attended by almost all Marine officers sometime during their Marine Corps career.

While these schools are an important part of the training conducted in Quantico, they represent only a portion of the educational program of MCS. Within the framework of the Marine Corps Educational Center, of which the Basic, Junior and Senior Schools are a part, are several other schools which are also making significant contributions in the field of Marine Corps education.

Foremost among these "other" schools of the Educational Center are the Extension School, the Communication Officers' School and the





**Extension School—courses mailed all over the world**

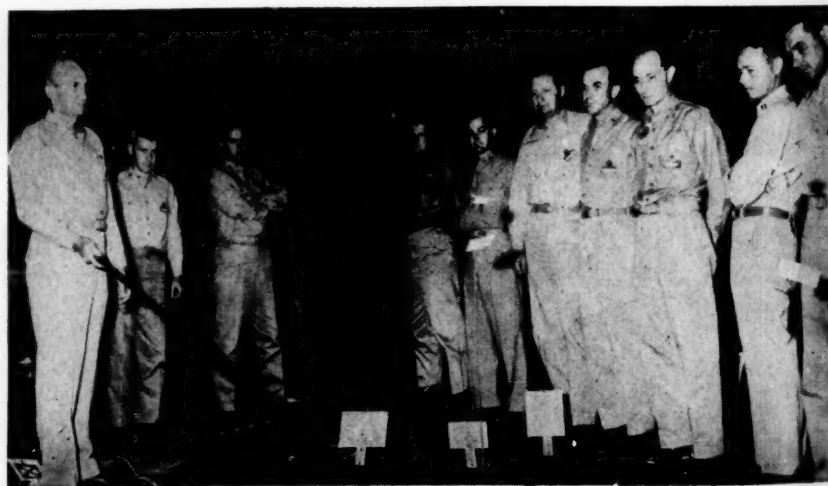
Ordnance School. Although perhaps not looming as important in the minds of most as the Basic, Junior and Senior Schools, a look at their accomplishments indicates they play essential roles in the Marine Corps educational system.

The oldest of the "other" schools of the Educational Center is the Extension School, veteran of almost a quarter of a century of service in providing instruction in military subjects to Marines by mail. Correspondence courses were initiated by the Marine Corps as a result of the passage of the Naval Reserve Act by Congress on 28 February, 1925. This act established for the Marine Corps an active reserve which could be utilized for service with the regular Marine Corps in the event of an emergency. The establishment of an active reserve presented for the Marine Corps the problem, among others, of providing for the training of these personnel. A partial solution to this problem was instruction through correspondence courses. As a result, the Correspondence School was organized as a part of the Marine Corps Schools, with Major Harold H. Utley as its first commanding officer.

Initially, instruction presented by the Correspondence School consisted of Army correspondence courses modified to meet the needs of the Marine Corps. The new school offered its first courses in the fall of 1926, and by the end of the first year 334 students had registered for one or more of the 20 different courses offered. Second Lieutenant Rex Saffer, VMCR, of Orlando, Florida was the first graduate. He com-

pleted 130 lessons and examinations of the infantry course.

Although the initial courses of instruction offered by the Correspondence School were prepared primarily for reserve officers, regular officers could also enroll along with a certain number of enlisted personnel who had been designated for commission in the event of an emergency. As time went on, the list of those eligible for enrollment increased. Today it is possible for enlisted personnel of all ranks, as well as officers, to progress through correspondence courses to a level of



**COS—this year, a new syllabus and mission**

instruction which parallels that given in the resident Senior School.

As the Correspondence School grew and developed, new courses were added to the curriculum and old ones revised. The old Army courses gradually gave way to courses written specifically to meet the needs of the Marine Corps. Eventually the

school was able to offer instruction in a majority of the subjects taught at the resident schools. As the enrollment continued to increase and lessons followed Marines to every corner of the globe, the Correspondence School came to be recognized as an essential agency for the training of Marines. Personnel assigned to recruiting and embassy billets, and other duty where they could not participate in organizational training programs, were able to continue their military education through correspondence courses.

In 1947, the name of the school was changed to the Extension Division and in 1950, this title was changed to Extension School. These changes were made, not because of any change in the mission of the school, but as a result of the reorganization of the Marine Corps Schools as a whole.

While the basic mission of the Extension School has remained essentially the same throughout the years, the changing needs of the Marine Corps have, from time to time, necessitated changes in the school's scope of operations. In March of this year the Commandant of the Marine Corps, therefore, redefined the mission of the school as follows:

- (a) To prepare and administer correspondence and/or package type instruction which parallels the level and type of tactical instruction presented at Basic, Communication Officers', Junior and Senior Schools.
- (b) To prepare and administer enlisted Basic Courses.
- (c) To process the enrollments of

Marine Corps personnel, regular and reserve, in correspondence courses offered by other service correspondence schools.

The instruction now offered by the Extension School is organized into specific courses. Each of these courses is designed to instruct students in a particular level of military education, and to increase the student's general knowledge with respect to a number of related military subjects.

Courses presently offered by the Extension School are the *Enlisted Extension Course "Basic"* and the *Enlisted Extension Course "Advanced."* Both of these courses are designed primarily to assist Marines in preparing for the General Military Subjects Test. They consist of instruction in the basic and tactical subjects required by current Marine Corps directives. The enlisted "Basic" course is open to all Marines. The enlisted "Advanced" course is open to all officers, all enlisted personnel of the rank of corporal and above, and to all enlisted personnel below the rank of corporal who have completed the "Basic" course.

*The Officers' Basic Extension Course.* This course is designed to provide instruction on the officer basic level. The instruction parallels the level and type of tactical instruction given at the resident Basic School of the Marine Corps Schools. It is open to all officers, to all staff sergeants or above and to all enlisted men who have previously completed the *Enlisted Extension Course Advanced*.

*The Junior Extension Course.* The instruction offered in this course is on the officer intermediate level and parallels the level and type of tactical instruction given at the resident Junior School of the Marine Corps Schools. Enrollment is open to all personnel, officers and enlisted, who have previously completed either the resident Basic School, or the *Officers' Basic Extension Course* and to all officers of the rank of first lieutenant or above.

*The Senior Extension Course.* The instruction offered in this course is on the officer advanced level and parallels the level and type of tactical instruction given in the resident Senior School of the Marine



**Ordnance School— from artillery to optical repair**

Corps Schools. Enrollment is open to all personnel, officers and enlisted, who have previously completed either the resident Junior School or the Junior Course of the Extension School and to all officers of the rank of major or above.

Each course offered by the Extension School consists of a number of separate subcourses. Each subcourse presents comprehensive, well-rounded instruction with respect to a particular military subject. For example: the Officers' Basic, Junior and Senior Courses each have a subcourse entitled, *Infantry Tactics*. In each case, this subcourse presents instruction in infantry tactics on the level of the course. A student may enroll for any one of the officers' subcourses without enrolling for the complete course. Subcourses for the officer correspondence courses are a condensation of instruction in a major tactical subject as presented in one of the resident schools.

Each student, regular and reserve, is awarded a diploma upon the satisfactory completion of an entire course, or a letter of completion for a separate subcourse. A copy of the letter of completion is incorporated into the individual's official records at Headquarters, Marine Corps, and also in his local personnel records.

For the Marine who is a member of the Organized or Volunteer Reserve, and not on active duty, the school serves as a means for maintaining and increasing his military knowledge. It also helps him progress in the Marine Corps Reserve retirement program by awarding him one or more retirement credits for each lesson or examination satisfactorily completed. For all Marines on active duty the school provides the means for increased proficiency

in their work and, in addition, provides enlisted personnel the material for preparing for the enlisted promotion examinations.

That the benefits to be gained from the school are receiving ever increasing recognition is attested to by the fact that during the past two years the number of enrollees has doubled. Today, over 9,000 students stationed all over the world are furthering their military education through the facilities of the Extension School.

The only school operated by the Educational Center engaged primarily in the training of enlisted personnel is the Ordnance School. The history of this school dates back to the period just prior to World War II when the Marine Corps was in the process of expanding because of the threatening international situation. In August, 1941 the Major General Commandant advised the Commanding General of the Marine Barracks at Quantico that it was intended to organize an ordnance school at Quantico as soon as personnel and equipment could be assembled. An ordnance repair depot was also to be formed in conjunction with the new ordnance school.

While instructors and students were immediately available for setting up the new school, sufficient ordnance equipment was not. As a result, the facilities of the Army Ordnance School at Aberdeen, Maryland were utilized pending the assembling of the necessary equipment at Quantico. Captain G. O. Van Orden (now BrigGen Ret'd) was designated as the first Officer-in-Charge of the new school.

In April 1942, the Ordnance School actually began functioning in Quantico. Initially, classes were



conducted for artillery mechanics, fire control repairmen, optical instrument repairmen and munitions technicians. The school at first was part of an organization known as the Weapons Group, Company "C," Training Center. The Training Center was subsequently disbanded and the Ordnance School became a part of Marine Corps Schools on 1 September, 1943.

Confronted with the problem of providing trained ordnance technicians for a rapidly expanding Marine Corps in the first years of the war, the school stepped up its training schedules. Instruction was placed on a block system in order to produce a maximum number of trained ordnance personnel in the shortest time practicable.

Since the end of the war the Ordnance School has been engaged primarily in the training of enlisted personnel for ordnance billets throughout the Marine Corps. It provides a steady flow of trained armorers and mechanics for assignment not only to the divisions in the field, but also for shipboard detachments, repair depots, organized reserve units and the far flung posts and stations of the Corps. In addition to its training responsibilities, the Ordnance School is charged with providing field and base maintenance for ordnance material assigned to Marine Corps Schools.

The organization of the Ordnance School consists of a Headquarters section and eight academic sections—Ammunition, Artillery, Fire Control, Infantry Weapons, Optical Instrument and Timepiece Repair, Ordnance Logistics, Tracked Vehicle, and Weapons Repair. Each of these sections prepares and presents instruction in its particular area of the ordnance field. All sections assist also in the maintenance of Marine Corps Schools ordnance equipment, with a majority of the work of this type being performed by the Weapons Repair Section.

For approximately nine months out of the year the Ordnance School maintains an enrollment of about 500 students. During the summer months the number of students is considerably decreased because billeting facilities normally available to students of the Ordnance School must be utilized by other agencies

of the Marine Corps Schools in connection with the various Reserve training programs. Student quotas for the various classes vary in size from nine to 83, and the courses vary in length from six to 16 weeks. Each month, students are being graduated from the school and new students are arriving to take up their studies. The scope of operations of the Ordnance School can be readily appreciated when it is realized that during the course of a year a total of almost 1,700 students is graduated from its various courses.

Each course offered by the Ordnance School is designed to qualify an individual for a particular Military Occupational Specialty in the ordnance field. Courses are presented for Infantry Weapons Armorers, Anti-Aircraft Artillery

the school the student receives instruction based primarily on the premise that a man learns best by doing. While lectures and demonstrations are an integral part of all courses, each man is afforded ample opportunity to work under expert supervision, with the same equipment he will later encounter in the field. Successful completion of a course in the Ordnance School is based upon the ability of the student to actually demonstrate that he can satisfactorily perform the duties of his speciality.

While the present curriculum of the Ordnance School provides only for the training of enlisted personnel, courses for the training of officers are available and are presented periodically to meet the needs of the Marine Corps. A short course of instruction is presented each sum-



**Naval Gunfire School—all phases of NGF support**

Weapons Armorers, Weapons Repair Shop Machinists, Tank and Amtrack Turret Mechanics, Ammunition Technicians, Light Anti-Aircraft Artillery Fire Control Equipment Mechanics, Fire Control Optical Instrument Repairmen and Field Artillery Weapons Armorers. During the fiscal year 1954, a total of 51 classes in these various specialties will be graduated from the Ordnance School.

Students for the various courses of the Ordnance School are drawn from Fleet Marine Force units, posts and stations, and from graduating classes of the Marine Corps Recruit Depots. In order to qualify for attendance at the Ordnance School, students must possess certain prescribed intelligence and aptitude qualifications. On assignment to

mer for reserve officers who are ordered to Quantico for their active duty training.

Although discussed here as one of the "other" schools at Quantico, a recent change in the Communication Officer School mission and scope of course has placed it on the same academic and professional level as Junior School.

Prior to World War I it had been the practice of the Marine Corps to utilize the Army Signal School at Fort Monmouth, N. J., and the Infantry Communication School at Fort Benning as the principal agencies of formal communication training for Marine officers. As the war progressed, however, it became increasingly evident that formal instruction for Marine Corps communication officers must be based on



the particular tactics and techniques of amphibious warfare. In order to satisfy this need, COS was established in June, 1944.

With the pressing demands of the

Previously, two five-month courses were given each year with most students coming directly from Basic School. Under the new mission, however, based on the Junior School

of supporting arms. A substantial number of hours are utilized for practical exercises in the classroom and in the field.

Completing the list of "other" schools conducted by the Educational Center are the Naval Gunfire Officers' School and the Aerial Observation Schools. These schools differ from the Extension, Ordnance and Communication Officers' Schools in that they are not permanent schools, but are conducted periodically as the need requires. They are conducted during the summer months, and a faculty is formed for each by drawing instructors from various other schools within the Educational Center.

The Naval Gunfire Officers School trains officers in all phases of naval gunfire support, shore bombardment and shore fire control. Special emphasis is placed on landing force aspects in order to qualify graduates for duty as naval gunfire officers of division or higher units, as amphibious gunnery staff officers and as instructors. Classes consist of from 20 to 30 students and extend for a period of approximately three months.

The Aerial Observation School which lasts for 14 weeks, has the mission of qualifying Marine officers as operations and intelligence air observers and as artillery observers. Students are selected on the basis of prior military experience and are required to pass a flight physical examination. Classes are small, usually ten to 20 students. In addition to classroom work students put in over 100 hours of time in the air performing reconnaissance type missions and adjusting artillery fire. Upon graduation they are designated "Naval Air Observers."

Within the Extension School, the Ordnance, Communication Officers', Naval Gunfire Officers' and Aerial Observation School, these "other" schools represent a considerable portion of the educational activities at Quantico. While the Basic, Junior and Senior Schools may continue to remain uppermost in the minds of those reflecting upon the functions of the Marine Corps Schools, these "other" schools also merit a proper appreciation of their important roles in the pattern of Marine Corps education.

USMC



**Aerial Observation School — over 100 hours in the air**

war as a spur, the new school immediately began operating at full capacity and by the time the war was over 235 communications officers had been graduated. Among the graduates were several Army officers and some from the Royal Netherlands Marines.

Today the staff of the Communication Officers School consists of 15 officers and 18 enlisted. Courses of instruction are presented for reserve as well as regular officers. The instruction for reserve officers consists of special short courses presented during the summer months. This instruction is designed to enable the reserve officer to maintain his proficiency in the communication field as well as become familiar with new techniques and equipment.

Just recently the mission of the school and the scope of instruction has been changed. The mission now reads: "To train officers in command and staff duties at the Marine battalion/squadron level and in staff duties at the Marine regiment/group and division/wing levels, primarily for communication duties within the Fleet Marine Forces." The scope of the course is now defined as: "... comprised of instruction in principles and techniques of amphibious warfare as applied within the Marine division/wing, with particular emphasis on communication-electronics functions therein."

level, the regular instruction presented will consist of one nine-month course given a year, and students will be in major, captain and some first lieutenant rank. Students in the school are not necessarily communication officers, at the time of entrance.

Instruction is divided into five major categories.

*General Subjects* includes Command and Staff, UCMJ, Training Management, etc.

*Organization and Tactics* covers combat principles, infantry, artillery, mechanized, engineers, aviation, etc.

*Amphibious Operations*, covering all phases of the amphibious assault and base defense, contains four different sub-courses.

*Applied Communications* includes the operational aspects of air and ground communications and three of its sub-courses — Ground Communications, Aviation Communications and Communications for Amphibious Operations — form the backbone of the entire course.

*Communication Engineering* concludes the course. It provides the student with sufficient technical background to carry out his duties as an operational communication officer.

Approximately one-half of the instruction in COS is on communications. The remaining half is spent on other staff duties and techniques



Mines are deadly and efficient, yet they remain .

# NOBODY'S FA

By Captain Richard W. Smith

ONE OF THE MORE POPULAR means of becoming a Korean battle casualty, if statistics are to be believed, was to tangle with a land mine. Men were killed in the attack, on the defensive, on combat patrols and trash-burning details; by light of the Panmunjon searchlight or at high noon, and all by a glorified demolitions charge.

No one likes mines. The engineers may admire their efficiency and the commanding general may appreciate the principles of their employment, but the fact remains that those who know them best hate them with a passion. The unexpectedness of their damage, the high percentage of lost limbs, their tendency to strike at friend and foe alike, and their limiting effect on the Marines' time-honored offensive tactics—all these add up to make it the stepchild at the family reunion.

Originally, the discovery of mines meant a call for the engineers. Now, because of the communist doctrine of all-out land mine warfare, this is no longer practical. In spite of the growing importance of land mines, however, the average Marine officer and enlisted man has little idea of mine mechanics, nor can he really be blamed. Some have never received training; the rest have been

crammed full of mine designations, nomenclature and characteristics for United States mines, Russian mines, North Korean and Chinese improvisations, German, Italian and Japanese versions (plenty of them still around, you know); then taught the intricacies of laying out a minefield, reference stakes, white tape, proper pacing, marking, recording and rows versus sections versus fields. And, if the course were really all-inclusive, there may have been some time spent on how to disarm and de-activate a mine—always with the cheerful warning that if the enemy really wanted to booby-trap a mine, your life insurance was going to come due in a blaze of glory. This is not an attempt to knock what I know to be an excellent course (I helped teach it at Basic School), but a comprehensive course of instruction can be just so much excess baggage for the combat infantryman if he is left without a firm grasp of fundamentals. The information that will keep him alive and able to carry out his mission could be printed on the back of a calling card.

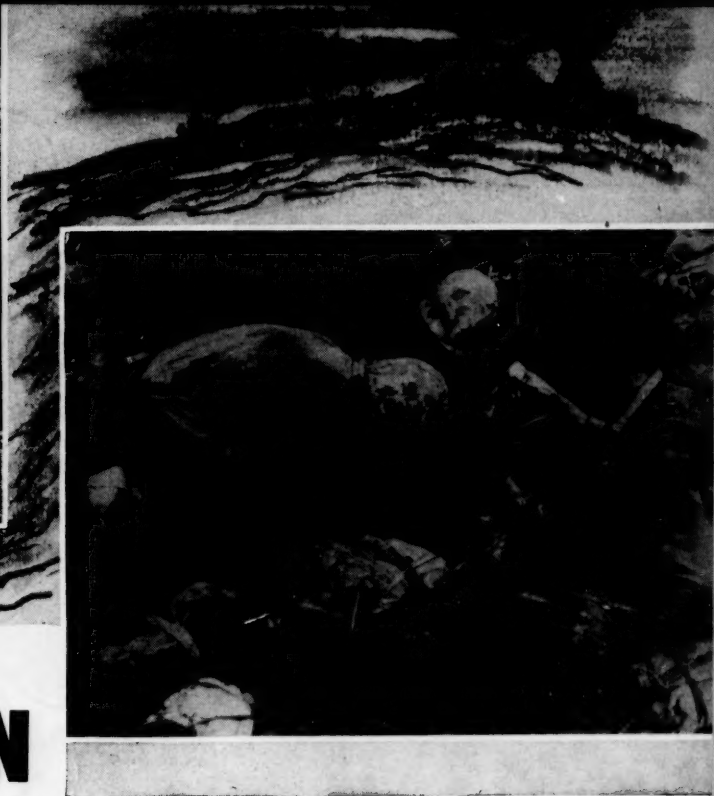
A mine is a form of explosive fitted with one or more firing devices that will be set off by some action of the prospective victim. This action must include either contact with the mine itself or with a trip wire leading from it. If you

don't touch the mine or its trip wire it can't hurt you. Obviously then, the first step is to locate the mine before you run into it. Granted, that in the snow there is small chance of accomplishing this but at all other times it isn't as hard as it sounds.

Let's divide mines into two classes: those using trip wires and those that do not. If a mine does not have a trip wire it relies on the pressure of your foot to set it off and, therefore, must be buried so that you won't see it before you step on it. Sometimes this can be done very effectively but, more frequently than not, the mine can still be found with the naked eye. The ground is obviously disturbed, or the grass above it has died, or the rain has caused the earth to sink in around the mine, leaving a depression. Any one of a number of eye-catching signs can give it away.

If a mine *does* have a trip wire it still may be buried, in which case you could locate it as before. But frequently it is set in above ground in order to increase its killing radius. In the latter event you stand a good chance of sighting the mine itself, but in either case the trip wire will warn you. They certainly wouldn't use trip wire if it were easy to see, but there are ways to find it—safely. (Just for the record, no one drags his feet in mine country. A straight up





# Y'FAVORITE WEAPON

and down step is much healthier.)

Sometimes a discarded wooden spool will warn you that trip wire has been used nearby. Often you can spot where the free end has been fastened to a bush or stake across from the mine. And finally, you can locate the wire by feel without danger. The most efficient method is to supplement your eyesight by moving your hands lightly through the air above the path, then across the path itself, feeling for a wire. This is an ideal method for night work too. It takes a minimum of three pounds' pull to set off the common firing devices, and your fingers will exert only ounces. If your mission requires more speed than this method allows, a thin stick or piece of wire (the wire around a case of C-rations is fine) held loosely in one hand with the point just grazing the ground will warn you of any wire it touches.

That may seem like a lot of time to spend just on finding the mine but, once you know where the mine is, the rest is relatively simple. Approach the mine carefully, watching out for trip wires and other mines. Don't touch anything until you have had a chance to look it over. With trip-wired mines there may be just one wire or there may be several, but they must all lead to the mine's firing device. Almost without exception, these firing devices can be ren-

dered harmless simply by inserting a safety pin, nail or heavy wire into its safety pin hole. When you have done this, check the other end of the trip wire and if you find another mine, insert safety pins there too. Then, without disturbing the mine, cut the trip wire close to the firing device and coil it back out of the way. Finally, holding the mine firmly to prevent its movement, unscrew or withdraw the firing device from the mine. Leave the mine where it is, it is doing nobody any harm. You have pulled its teeth and that's that!

If the mine has no trip wires and is buried, you are in for a little more work, but nothing back-breaking. First, very gently scrape the dirt off the top of the mine. Then, carefully and *without moving the mine*, dig a little trench around its sides. If you can see the firing device, insert safety pins as before and remove the device. If the mine is round it is probably an anti-tank mine. There should be a round plate screwed into its top; unscrew this and remove the firing device that you find beneath the plate. Finally, if the mine is a wooden box, hinged at one end, carefully lift up the lid and remove the firing device you see inside. So much for buried mines.

You will notice that at no time have you moved the mine itself.

That is because the enemy occasionally puts an "anti-lift" device under the mine, something like setting the mine on the spoon of a hand grenade with its pin pulled. If anyone lifts the mine, off goes the grenade. The way to beat this is to leave the mine where it is; you have removed the device that would set it off. If your orders do not permit this, tie a line around the mine, get behind cover a good distance away and pull the mine from its position. Even if it has been booby-trapped it can only explode harmlessly.

I said that the information that would keep a man alive in mined areas could be printed on the back of a calling card. What I had in mind was something like this:

Lift your feet in walking. Find the mine by observation. Check both ends of trip wires, insert safety pins and remove firing devices. Carefully uncover any buried mine, locate firing devices and remove them after inserting safeties. Never move the mine itself except by the rope-pull method.

Nobody likes mines, but that doesn't mean you have to butt heads with them. Just pull their teeth and they aren't bad at all. USMC



AEGEAN SEA

XERO BAY

DEMONSTRATION

SUVLA BAY

Anzac

MAIDOS

OF DARDANELLES

CHANAK

29th

KRITHIA

STRAITS

CAPE HELLES

SEDDER  
BAHR

FEINT  
French

KUM KALE

RUINS OF TROY

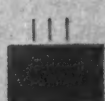
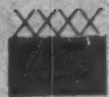
DEMONSTRATION

TENEDOS

# GENERAL ALLIED PLAN FOR GALLIPOLI CAMPAIGN

ALLIED ATTACK

ENEMY DISPOSITION



By Captain R. B. Asprey

# GALLIPOLI

**If the British had had an adequate amphibious doctrine, a major victory  
for the Allies could have been accomplished at Gallipoli**

FEW BATTLES IN HISTORY HAVE proven so contentious as that of the Gallipoli action in World War I. In the course of its blood-soaked nine months, Gallipoli created vitriolic and unending arguments between the Allies, prevented the Balkans from joining the Central Powers (excepting Bulgaria which joined in October), caused the government of England to fall, brought a reluctant Italy over to the Allied side and reduced Turkey to a state of near military impotence.

Gallipoli also proved that large forces can land against beaches defended with modern weapons of war. This fact has been of vital importance to the United States Marine Corps whose doctrine and techniques of amphibious assault embody many of the lessons inherent in the magnificent failure of Gallipoli.

At the end of 1914, a tactical impasse on the western front turned Allied eyes eastward to other fields. Turkey, allied with Germany, but separated by neutral Rumania and Bulgaria, was fighting Russia in the Caucasus while preparing to invade Egypt. She was believed to be weak, her government shaky and her war materiel scanty. If a fleet got to Constantinople, wouldn't she fall? If a fleet ever reached the sea of Marmora, surely Greece, Bulgaria,

Rumania and Russia—hereditary Turkish enemies, all—would hasten to Constantinople with strong foot armies. The defeat of Turkey would unite Allied and Russian forces; would mean cherished Russian grain in exchange for vital weapons of war. Her defeat would release vast British and colonial forces in the south. It would open the gate northward to the hard-pressed ally Serbia, then through Austria to an attack against Germany's left flank.

Gallipoli, of course, flanks anything entering the Straits of the Dardanelles (see map). England had

looked at the Peninsula back in 1906 when Germany had definitely emerged as a potential enemy. At this time the British Army wanted only to campaign in France in event of war against Germany. Her navy, of which Admiral Lord Louis Fisher was principal spokesman, entertained different ideas. Fisher said the army, which he defined "as a projectile to be fired by the navy," should be landed on Baltic shores to take Germany's right in the Schleswig-Holstein area. An attempt at compromise led to a careful consideration of the Dardanelles by the

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Committee on Imperial Defense which, in 1909, concluded that: "... the operation of landing an expeditionary force at or near the Gallipoli Peninsula would involve great risks and should not be undertaken if other means of bringing pressure to bear on Turkey were available." From this time, the Dardanelles had no place in British military planning.

When in December, 1914 Russia asked the Allies for immediate help against the Turks, the British Minister of War, Lord Kitchener, after stating that not a soldier was available, asked the First Lord of the Admiralty, Mr. Winston Churchill, if the navy could make a demonstration off the Dardanelles. This operational germ grew during January, 1915; first, to the concept of a naval forcing of the Straits by extended fleet operations, and second, to army participation by a landing on the Peninsula.

In March, 1915 General Sir Ian Hamilton, a veteran of campaigns in Egypt, India and Africa who was called the ablest commander in the field, arrived at Gallipoli. Plucked quite arbitrarily from a home command on 12 March by Lord Kitchener, he had been sent to head the military force in case troops would have to be employed.

Hamilton arrived in time to witness the great naval failure of 18 March. Admiral de Robeck commanded a British-French force which included 12 battleships, six cruisers, 16 destroyers, six submarines, 12 minesweepers plus auxiliary vessels which had been given a mission "to bombard and take the Gallipoli Peninsula with Constantinople as the objective." He had begun operations on 19 February and despite frequent interruption by bad weather, had met with fair success. But on 18 March part of his forces struck an unknown minefield in the Eren Keui Bay: three battleships were sunk and two badly damaged. Whether it was because of this loss and the tremendous hurt which it occasioned, or whether Hamilton's presence exercised undue influence upon him is not known—but de Robeck, despite every encouragement from the Admiralty, capitulated to fear and dispatched Whitehall that the army would have to take the forts at the Narrows before



Eyre & Spottiswoode

### ***Admiral de Robeck and General Hamilton***

the navy could force the Straits. Kitchener had already told Hamilton, "... if the Admiralty fails, then we will have to go in. . ." The Admiralty had failed. Now the army had to go in.

Hamilton was not ready to go in. In his own words, "Ten long years of General Staff . . . ; where are your well-thought-out schemes for an amphibious attack on Constantinople? Not a sign. The Dardanelles and

### ***Gallipoli's complications forced Churchill's resignation***

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Bosporus might be in the moon for all the military information I have got to go upon. When I asked the crucial question: the enemy's strength? Kitchener thought I had better be prepared for 40,000. More actually there were only some 20,000 in the Peninsula. How many guns? No one knows."

Nor was this all. Although a sizeable force was his to command, only the 29th Division was in an advanced state of training. But it was still enroute from England and it had been embarked in such a manner that it would have to be de-barked and re-embarked before it could possibly land as a fighting force. The primitive harbor facilities at the forward base of Lemnos Island could not begin to cope with such a transport fleet. Thus, it must sail to Alexandria which meant at least a three-week delay.

Hamilton, with those staff officers Kitchener had sent to him, began work in Alexandria on 24 March. He had to order an operation for which there was very little historical precedent. He had, of course, Jomini's 1838 statement of broad principles governing amphibious "descents" and the German von Edelsheim's later and more detailed studies on the same subject. But as for anything remotely comparable to an assault against beaches defended by modern weapons, he had nothing. The Port Arthur action of 1905 was not an assault landing. The Italian division at Benghazi in 1911 landed against "a motley force of Turks and tribesmen . . . destitute of artillery or machine-guns." It is much to Hamilton's credit, in fact, that his appreciation of the situation concludes with what has been reworded into an accepted principle of the amphibious assault: "We've got to take a good run at the Peninsula and jump plumb on—both feet together. At a given moment we must plunge and stake everything on the hazard."

Hamilton's mission, of course, partially dictated his plan. He was not supposed to seize the entire Peninsula and drive on to Constantinople. His forces and supply were far too scanty for that. Assisted by the fleet, he was to seize and hold the western forts at the Narrows after which the fleet would re-assume the primary operation. His

ultimate objective was not the entire Peninsula—it was the Kilid Bahr plateau (see map).

Intelligence exercised a particularly strong influence on his plan. A grossly inaccurate map of the Peninsula was available to the British. Additional terrain analysis depended on reconnaissance by ship and airplane. The latter were few in number and their use severely restricted by poor weather. Prior to 14 April, no aerial cameras were available; poor film subsequently negated the

Hutchinson & Co.



**Commander of a division on Gallipoli, Mustapha Kemal Bey was later to become Pasha and first President of the Turkish Republic**

value of the first photographic missions flown. Three divisions or 34,000 enemy troops were believed to be on the Peninsula, with one division at Bulair, one in the north-central area around Kilid Bahr, and one south of Achi Baba. Almost nothing was known of enemy defenses, partly because of poor reconnaissance and partly because of their having been skillfully prepared and concealed at night! Hamilton's inadequate intelligence caused him to greatly underestimate the rugged quality of the terrain and to overestimate actual enemy force. The former explains the optimistic objectives assigned to subordinate units, and the latter his dispersal of forces in an attempt to get as many troops as possible ashore at the same time.

To secure the immediate objective of the Achi Baba heights, Hamilton

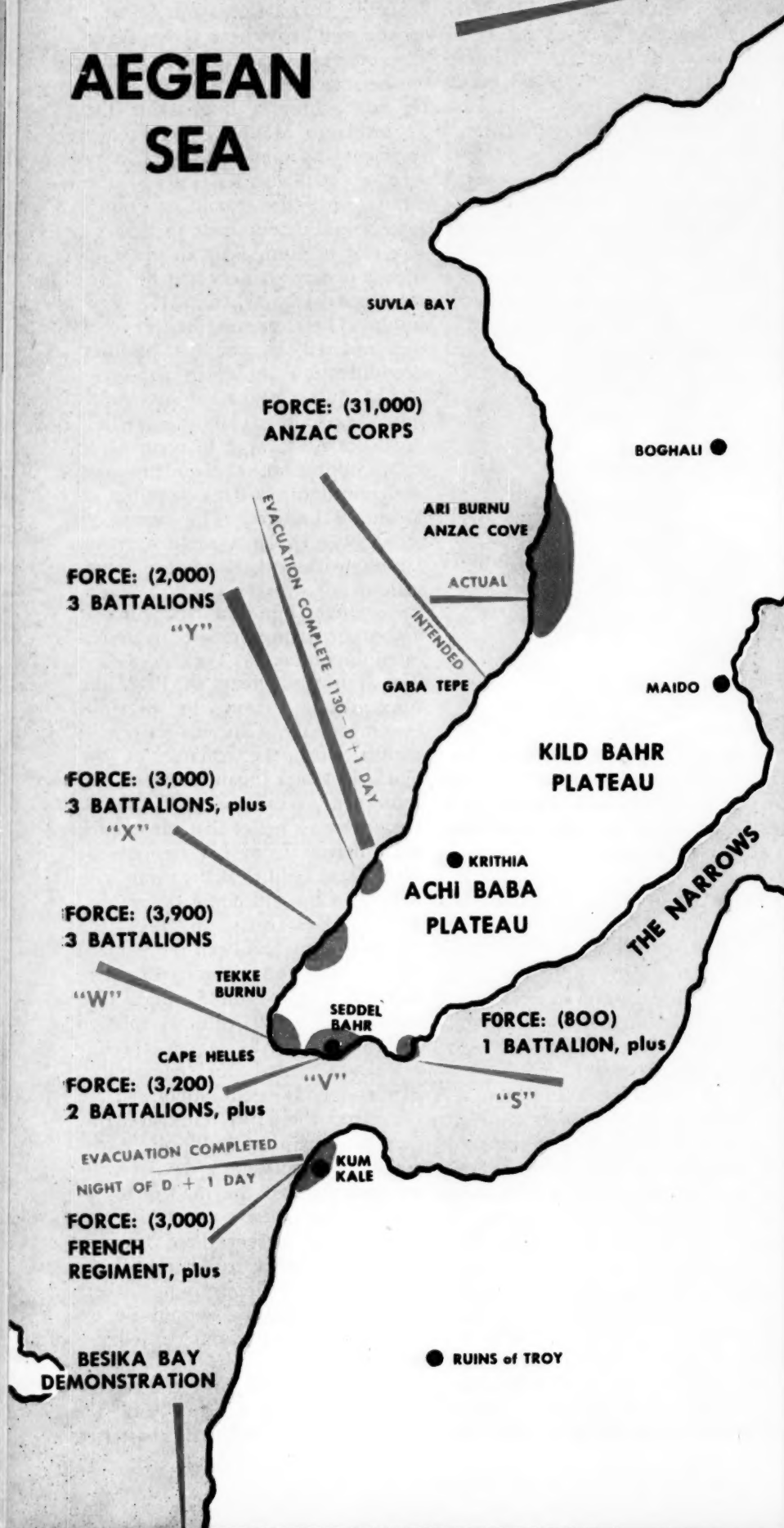
ordered a primary attack by the British 29th Division against five southern beaches designated Y, X, W, V and S. The Australian-New Zealand (Anzac) Corps was to land on the west coast near Gaba Tepe, a secondary attack to isolate the southern tactical area from the north by establishing a line across the Peninsula to Maidos. One French regiment was to make a diversionary landing at Kum Kale across the Straits, while the remaining French force would demonstrate in Beshika Bay east of Kum Kale in order to silence enemy artillery and hold reinforcements away from the Peninsula. The remaining British force was ordered to conduct another demonstration up north in Xeros Bay by Bulair, also a holding operation. The southern landings, including Kum Kale, were to occur after a 30 minute naval bombardment and simultaneous flank landings at Y and S beaches. The secondary attack was to be a night surprise landing without naval gunfire preparation.

Although Hamilton overestimated immediate enemy strength, he underestimated the individual Turkish soldier. The Turkish defeats of 1912, the Alexandretta action the previous December, the Caucasus failure a month later, the collapse of the Turkish attack against Egypt—all combined to mislead most British leaders into a belief that the enemy, once driven from his trenches at Helles and Sedd el Bahr, would run back to Constantinople or at least Bulair. But early in 1914 the Turkish army had been reorganized by the able and vigorous Prussian, General Liman von Sanders, who headed a German military mission to Turkey. On 24 March, the day Hamilton sailed for Alexandria, Sanders had been appointed to command the Fifth Turkish Army for the defense of Gallipoli. Arriving at the Peninsula a day later, he at once realized the inadequacy of the existent defense, one which employed the decentralized outpost concept of trying to defend all the beaches. After determining "where the hostile landing should be expected," he set about to change things.

Because of the unrestricted terrain, the good beaches and the importance of the Asia batteries,

# AEGEAN SEA

## XEROS BAY DEMONSTRATION



Sanders believed this shore the most important. On the Peninsula he believed the southern area around Sedd el Bahr and Tekke Burnu, the coast on both sides of Gaba Tepe and the vicinity of Bulair in the Bay of Xeros to be especially important. Accordingly, he formed three defensive sectors on Gallipoli and ordered "the divisions to hold their troops together and to send only the most indispensable security detachments to the coast within their sectors."

Stressing mobility above all else, Sanders ordered constant marches and exercises. In addition, he assembled boats in small ports along the Straits and built direct land communications between the sectors. Incredibly enough, almost all of this work was accomplished at night. Not a minute was wasted: "The British gave me four full weeks before their great landing . . . the time was just sufficient to complete the most indispensable arrangements and to bring the 3d Division from Constantinople."

At 0330 on 25 April the signal, "Land armed parties," sent 1500 Anzac troops over the sides of three battleships into 36 small craft towed by 12 steam-powered picket boats. Almost immediately the rest of the covering force, 2,500 troops, debarked from eight destroyers into lifeboats which had been towed from the base at Imbros.

During the 20 minute run to the beach a strong current displaced some of the tows and moved the entire formation almost a mile north of the intended landing place at Gaba Tepe. This error, although undoubtedly saving lives by avoiding the Gaba Tepe fortifications, caused a severe intermingling and confusion of troops on the small beach. The unfamiliar and very rugged terrain rising to the immediate front compounded the confusion. Fortunately, immediate enemy resistance was negligible. Some reorganization was effected on Plugge's Plateau, but several battalions went forward understrength and in one case enough "lost" troops drifted together to form a composite company. And as yet the enemy had not been met in force!

Despite shell fire from Gaba Tepe and increasing enemy resistance inland, by 0600 the First Ridge stood



cleared of the enemy. By 0700 only a few snipers remained on Second Ridge and forward parties had penetrated Third or Gun Ridge, the objective of the covering force. One officer stood on the heights of Scrubby Knoll just three and one-half miles from the Narrows. This was the closest any Allied soldier was ever to get to the objective of the Campaign.

The troops landing at Y Beach were to advance inland, capture a Turkish gun believed located in the vicinity, divert Turkish reserves proceeding to Helles and contact the troops on their right at X Beach. Later in the day, when the southern force drew level, the Y force was to join it for the attack on Achi Baba.

Like the Anzac landing to the north, this was a surprise maneuver; the troops landing at 0500 simultaneously with the opening naval bombardment to the south. By 0530 all troops were ashore and had moved out. Only four enemy soldiers were found. At 0730 two companies of Royal Marines moved out to search for the alleged Turkish gun. Throughout the morning the entire force sat quietly in its initial position awaiting the advance from Helles. The commander actually walked across Gully Ravine to within 500 yards of Krithia village which to him appeared deserted.

At S beach, on the other hand, the landing scheduled for 0500 was delayed by strong currents until 0730. The beach (no more than a small break in the cliff) was not defended, but an enemy platoon did defend the approaches to, and the top of, the cliff. A flank landing by one company, however, easily turned this defense and by 0800 the entire position had been taken. Directed to await the advance from Helles, like the Y Beach force, the commander now used the quiet hours of the morning to consolidate his position against attack by the 2,000 Turks rumoured to be in the vicinity.

The key to Hamilton's plan was the three southern beaches, X, W and V. Because of their smallness, the strong current and possible hidden reefs, the landings were to be in daylight after a naval bombardment, commencing at 0500 and lifting inland at 0530, on located enemy emplacements as far north as



Underwood & Underwood

### **General von Sanders and staff masterminded Gallipoli's defenses**

Achi Baba. Simultaneous landings were to gain the high ground above W and V beaches. The three forces would then join to proceed north, pick up the Y Beach force and establish a line running generally from Y Beach to Sedd el Bahr. The main force, having landed in the interim, would advance to the day's objective, the Achi Baba ridge.

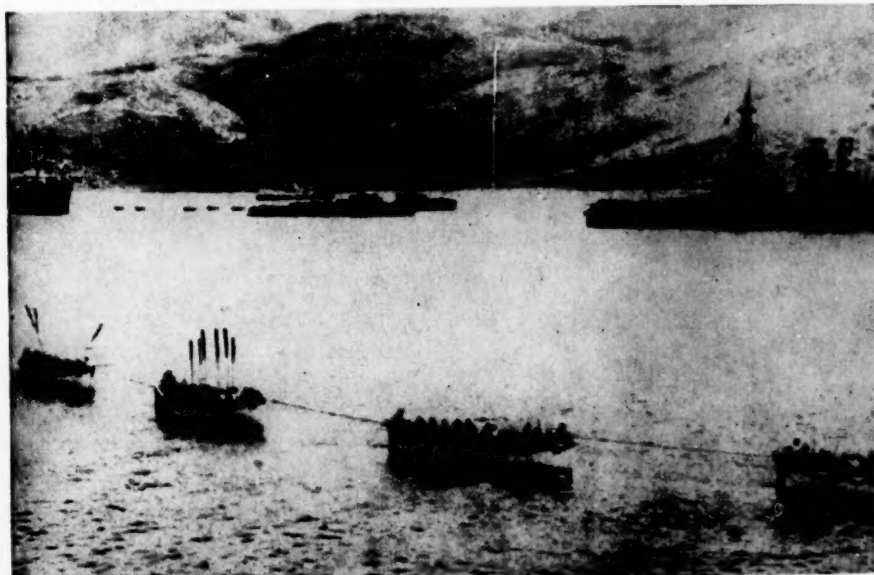
The landing scheduled at 0530 was delayed until 0600 in the vain hope that the S troops on the right would get ashore. By 0630 troops had landed on the 200 yard-long X Beach, routed the 12 man enemy picket and reached the top of the cliff without a casualty. By 0730 the remaining units and materiel had

been landed. The first troops, pushing inland quickly, met organized resistance. At 0800 a fire fight of major proportion had developed on the left flank. Units pushing right, however, to join up with the W force had seized Hill 114 by 1100.

W Beach was not so easy. About 300 yards long and 15 to 40 yards wide, flanked by steep cliffs and fronted by sand dunes rising to the ridge above, it had been prepared for defense. Trip wires lay in the water a few yards out from shore while just on the beach a deep belt of wire ran almost the entire length. Some land mines had been laid on the beach. Short, skillfully concealed trenches to the front, and at

### **Steam launches towed picket boats to Anzac Beach**

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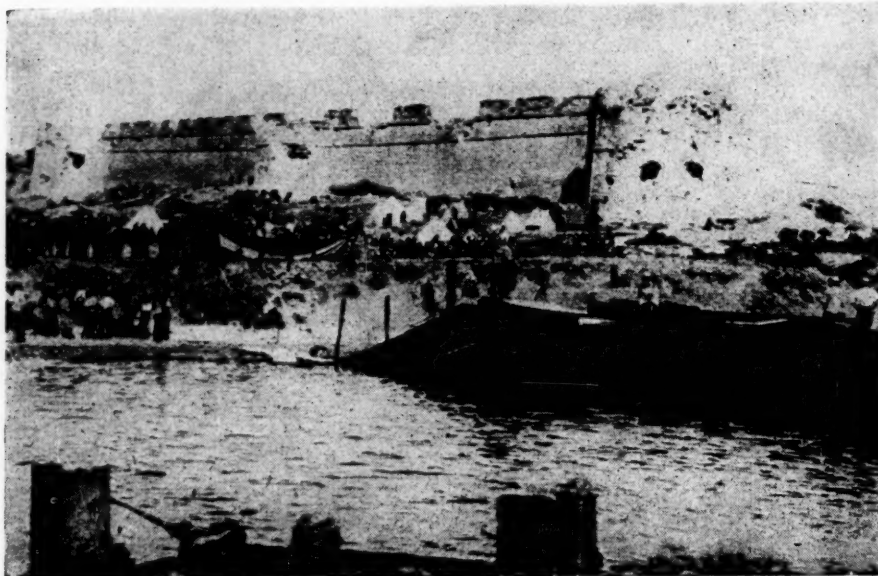
**Anzac Beach: the landing was to be made a mile further south**



Eyre & Spottiswoode

**"V" Beach: the enemy blasted boats from Fort Sedd el Bahr**

Underwood & Underwood



the summits of the cliffs were buttressed by other trenches on the high ground. Two redoubts, both protected by heavy wire and smooth coverless approaches, fired from Hill 138. Wire ran from the southernmost redoubt to the cliff to seal off V Beach on the right.

The enemy opened up just before the first boat touched sand. Despite severe casualties, small groups struggled across the beach to capture the immediate front trenches. Fortunately at this point General Hare, who was following close behind the first troops, noticed another landing site just north of the bay. Diverting his own and the other oncoming boats to it, he led the troops ashore against no opposition. At once he gained the top of the cliff to flank the defenders on that end of the beach. By 0715 the beach and immediate heights were his. But a few minutes later, while leading a small party north to X Beach he was mortally wounded. His brigade-major, after passing command of the brigade to LtCol Newenham at X Beach, organized an attack on the right. This at once bogged down from lack of command, unfamiliar terrain, wet and useless compasses, field glasses and watches. Throughout the morning fighting continued for the redoubts on the right and Hill 114 on the left.

If W Beach was difficult, V Beach was impossible. Ten yards wide, 300 yards long and bordered generally by a five foot bank, fronted by gentle slopes rising to a 100-foot height, flanked on the left by Fort No. 1 and on the right by Sedd el Bahr fort, V Beach was the major defense of the entire complex. Three wire belts, two horizontal and one perpendicular, began 20 yards in. At least two automatic cannon and four machine guns supported the defending riflemen. So expertly emplaced was the trench network that far from being sighted by pre-landing reconnaissance, individual trenches were not located until the afternoon of D-day by officers using strong field-glasses from the bridge of HMS River Clyde only a few hundred yards away!

This landing, too, was delayed by the current until 0630. The enemy, having had sufficient time to reorganize from the effects of the naval gunfire, literally blasted the first

boats from the water. Some of the boats drifted helplessly away with every man in them killed. Many more of the Dublin Fusiliers were killed as they waded ashore. The badly wounded, stumbling in the water, were drowned. Those who succeeded in landing safely, and in crossing the strip of sand, managed to gain a precarious shelter under the bank on the further side. Few of the boats were able to get off again and, with their crews, were destroyed on the beach.

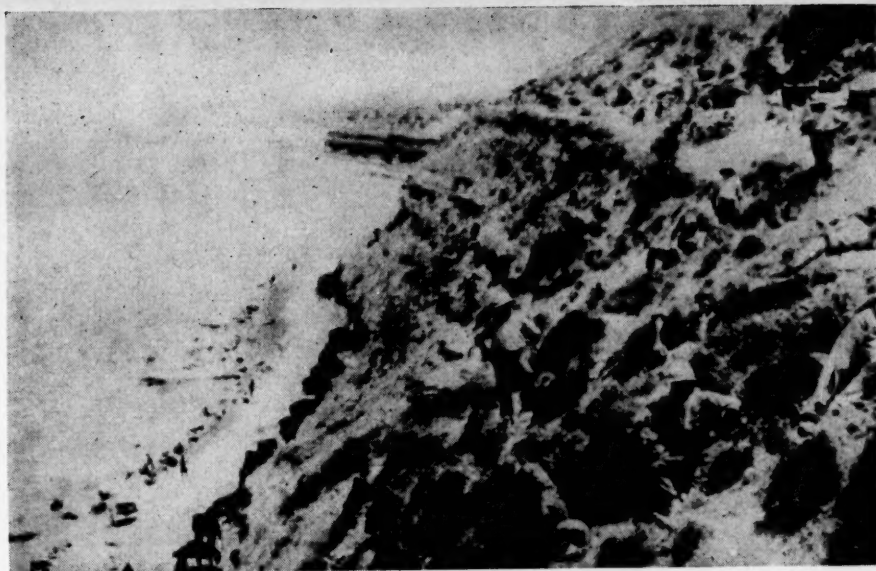
Off to the right on HMS *River Clyde*, a collier holding 2,500 troops, things went just as badly. Its hopper, a small craft intended to bridge the distance from the *Clyde's* bow to the beach, broached uselessly alongside. The captain, Commander Unwin, with the assistance of an able seaman personally salvaged lighters from the hopper to erect a makeshift bridge. Upon its completion, two companies of troops streamed out from the *Clyde* only to meet instant death. At this point the bridge collapsed.

Another bridge had been built by 0900. Again a company attempting to land across it was all but decimated. Further landings were impossible. The few men ashore impotently hugged the earth behind the five foot bank; beach, water and lighters were covered with corpses; a thousand troops sat imprisoned in the *Clyde*. The V Beach landing, at least for the time, had had it!

On the extreme right of V Beach, two platoons landed at the Camber. Although getting ashore safely, in their subsequent advance to Sedd el Bahr, they were wiped out before the morning had ended.

Major General Hunter-Weston, commander of the southern landings, had his command post aboard the battleship, HMS *Euryalus*, 1,000 yards off W Beach. Poor communications had kept him so ignorant of the overall situation that at 0830 he ordered the main force to land as scheduled, diverting only one battalion from V Beach to W Beach for replacement purposes. Subsequent landing attempts at V Beach could only mean more casualties.

The Commander-in-Chief, General Hamilton, commanded from the battleship, HMS *Queen Elizabeth*. At 0600 he left for Helles af-



Wm. Heinemann

**"X" Beach landing was virtually unopposed**



Wm. Heinemann

**While the British unloaded . . . Turks moved to meet them**

Underwood & Underwood







Underwood & Underwood

### ***Turkish artillery delayed the arrival of troops and supplies***

ter the apparently successful Anzac landing. On passing Y Beach, he received its welcomed signal of success. Later appraised of the hold-up at V Beach, he asked Hunter-Weston at 0920 if he wished more troops landed at Y Beach. The latter, ignorant of the situation at either Y or V and advised by his naval officers that interference with the present debarkation would cause more delay, returned a negative. Hamilton, whose only reserve was demonstrating at Xeros Bay, knew very little about the southern situation. Logically assuming that Hunter-Weston was well informed, Hamilton did not feel justified in ordering him to commit his reserve at Y Beach. This was a fatal error!

More troops had already landed at Y and S Beaches than the enemy had at the southern end of the Peninsula. By 1300 D-day, 12 British battalions opposed two enemy battalions. But to exploit such strength the commander must be aware of it. Faulty communications prevented knowledge of his own situation. Faulty intelligence compounded by lack of initiative on the part of unit commanders prevented knowledge of the enemy situation. The result was a command breakdown which is the only explanation for failure to exploit the most glorious opportunity of this campaign and consequently one of the most glorious opportunities in tactical history.

By the afternoon of D-day, the luxury gained by tactical surprise ran out. Enemy reinforcements dispatched early that morning began to arrive at all fronts.

At Anzac Beach, artillery fire from Gaba Tepe delayed the arrival of troops and supplies. Although 15,000 troops were ashore at 1800 D-day, only one battery of artillery was landed. The enemy, led by aggressive Mustapha Kemal, began to close in strength by 1600. By nightfall the Anzacs, who outnumbered the enemy three to one, had been pushed back to the First Ridge. Thoroughly disorganized and dispirited, the local command decided that evacuation was in order. General Birdwood, the Corps commander, recommended this to Hamilton, just returned from the south. The latter disagreed and directed the Anzacs to hold what they had: "You have got through the difficult business. Now you have only to dig, dig, dig, until you are safe." This they did. By D plus three days the attacking enemy had failed to move them from the First Ridge. The price of its possession was not cheap—Anzac casualties totalled 5,000.

The enemy closed with Y Beach at 1740. Ignored by Hunter-Weston, who had his hands full at Helles, Colonel Matthews successfully beat off Turkish counter-attacks during the evening and night of D-day. But now a vast paralysis of fear and defeatism, which had been creeping among his troops since the previous afternoon, caught hold. During an attack the morning of D plus one, the troops not engaged in the defense were actually evacuating from the beaches below. Tired and discouraged, feeling his force the Lost Legion, and believing himself hopelessly outnumbered, Matthews failed

to halt the evacuation which was completed before either Hunter-Weston or Hamilton knew of it.

The troops from X and W Beaches involved in the fighting for Hill 114 were engulfed by a vast wave of inertia after the capture of this important height. The outnumbered enemy could not possibly have stopped an advance of this force, but the loss of senior commanders and the lack of alternate orders from division did.

On the right flank of W Beach fighting continued for Hill 138 which, with its two redoubts, was carried by late afternoon of D-day. But V Beach remained in enemy hands.

Across the Straits, in Asia, the reinforced French regiment had landed at 1000, delayed by the strong current. The additional hours

Eyre & Spottiswoods



### ***A lesson in camouflage from a captured Turkish sniper***

of naval gunfire, however, permitted a landing against only slight resistance. By evening the whole force was ashore and well established in a perimeter defense, which was maintained despite several major enemy attacks. On the morning of D plus one, the French troops still afloat were ordered to land at W Beach. Since this left no reserve for the Kum Kale force, which faced increasing Turkish strength, a decision was made to end the feint by



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evacuation that evening. A few hours later, during the French attack against Orkanie Mound, an entire Turkish battalion retreated and 450 enemy soldiers surrendered in mass. When this information reached Hamilton the evening of D plus one, he reversed his earlier decision to evacuate and directed the Kum Kale force to remain another 24 hours. By the time the French commander received this order, however, the evacuation was almost completed.

On V Beach, the night of D-day had been used to land the remaining troops from HMS *River Clyde*. It was these troops who the next day fought a prolonged and desperate hand-to-hand battle for Fort No. 1 and Hill 141. By 1500 both were taken—the Allied line now stretched from X Beach to Sedd el Bahr. Unfortunately heavy casualties, tired and hungry troops, water and ammunition shortages, lack of reserves and the enemy's supposed strength combined to dictate defensive thinking. "There must be no retiring," General Hunter-Weston ordered. "Every man will die at his post rather than retire."

Since the morning of D-day, British opinion of the Turkish soldier had radically changed. Not only was he a hard fighter, he was cunning as well: "... the enemy played every possible trick. They had machine guns in the brush, the gunners with hands and faces stained green, and with boughs and whole bushes tied about them. Dug-outs everywhere with snipers ... most of them with food for several days and anything up to 2,000 rounds, and deadly straight their shooting was. . ."

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The first battle for Krithia on 28 April, D plus three, marks the beginning of the land phase of the campaign which quickly assumed identical proportions of the western front war of position, characterized by costly and futile offensive against trench defenses. By D plus 35 days, British casualties alone totalled over 38,000—a figure larger than the entire British loss in action during the Boer War.

Some strategic profit did result. In May Italy joined the Allies. The Balkan states, waiting like vultures to pick the losers, still did not dare

to cast their lot with the Kaiser despite his threats and the seeming Allied impotence elsewhere. Pressure was also taken off the Russians in the Caucasus.

But for Hamilton the month of May offered no good fortune. In Britain a drastic governmental reorganization was precipitated by Lord Fisher's open refusal to countenance another naval offensive against the Straits as championed by Churchill. German submarine operations in the area sank two British battleships, forced the fleet to the sanctuary at Mudros and caused Fisher to demand the immediate withdrawal of the HMS *Queen Elizabeth*. The ensuing hostility forced Mr. Asquith to form a coalition government and to accept the resignation of Mr. Churchill as First Lord of the Admiralty. The delay attendant with reorganization halted reinforcements to Hamilton at a time when the enemy was daily adding to his fortifications in the south, and was receiving divisions freed from the Bosphorus by removal of Russian troops from Odessa to the wavering Polish front.

At this time, the first serious epidemic of dysentery broke out among Hamilton's troops. This problem was to plague him for the remainder of his time on the Peninsula.

By August, enough reinforcements had reached Hamilton for him to try a new offensive. He now planned a night attack from Anzac beach east to gain Sari Bair. Simultaneously, two divisions would land at Suvla Bay to support the Anzac northern flank and to gain a good harbor for later supply purposes. The Helles force would conduct a holding operation in the south and demonstrations would be made at both ends of the Peninsula. In essence, the plan was similar to that of April.

Unfortunately, the conduct of the attack was also very similar to the April action. Difficult terrain, a determined enemy and, above all else, command confusion were to thwart Hamilton's best laid plans. While the attackers several times gained the periphery of the objective, they were inevitably pushed from it. The Suvla Bay landing was made without difficulty but, once ashore, the troops simply failed to push the attack. On



Hutchinson & Co.

### *The Sanders' style of trench*

10 August heavy losses reduced the effort to the defensive.

The August action cost the Allies 42,000 casualties. Although the enemy suffered even worse, he was able to replace his losses. Hamilton could not.

With this failure the Gallipoli Campaign was doomed. Because of the proposed October offensive in France, and a severe waning of enthusiasm for the operation, replacements were not provided. In September, the Salonika expedition was directed in a futile attempt to save Serbia—Hamilton lost three divisions to that front. In October, Bulgaria joined the Central Powers and London began to consider evacuation from the Peninsula. On 15 October, Hamilton was relieved of command. General Munro, an advocate of evacuation in favor of the Salonika front, took over.

On 9 January, 1916 the last Allied soldier left the Gallipoli Peninsula. So ended this action which poignantly exemplifies the meaning of Wellington's classic phrase: "Nothing except a battle lost can be so melancholy as a battle won." US MC

# passing in review

BOOKS OF  
INTEREST TO  
OUR READERS

## Soviet Studies . . .

SOVIET MILITARY INTELLIGENCE: TWO SKETCHES—Anonymous. 21 pages. New York: Research Program on the U.S.S.R. \$35

The most striking thing about this pair of personal accounts by a former Soviet officer and Communist is that it does *not* deal with Soviet military intelligence in a general, all-inclusive sense. Instead, one sketch portrays the shadowy cloak-and-dagger training of the author as he attends an army school for diversionists (spies and saboteurs) during World War II, and the second recounts some examples of how the interior counter-intelligence of the army worked during the 1937-1947 period. This might tend to lower the value of the pamphlet from the point of view of the military reader if it were not for the fact that a good many glimpses are taken into what was, at any rate, fairly typical Soviet Army life.

It's hard to beat first-person accounts about the down-to-earth characteristics of a foreign army, even if the accounts are given in a style suggestive of response to an interrogation. Probably for this reason, the first sketch is the more effective. It is definitely the writer's individual remembrances, sometimes a bit hazy, of a weird period in his military career when he was learning the fine art of deception, demolition and informing, within the hush-hush confines of a monastery in Belorussia. Strangely enough, his tales of the wild breed of the students and the unprincipled nature of the curriculum sound very similar to claims made by the Soviet press within the last year or two about alleged U. S. espionage schools in Germany. Since this pamphlet was first published before 1952, it would appear that the old Communist trick of accusing others of things of which they themselves are guilty is still being used.

The second sketch is actually a compilation of accounts about the activities of the M.G.B. and the



"Smersh" ("Death to Spies") sections of the Soviet Army. As such, it inevitably touches on the matter of political control in the army, which was the subject of another pamphlet published by the same Research Program and reviewed in the September issue of the GAZETTE. By means of these illustrative accounts, the author substantiates much of the previous pamphlet's statements. The 1937 purges in Vitebsk Province, the pressures placed on a militarily illustrious Air Brigade Commander, the harsh reprisals taken against the populace of Russian areas which had previously been occupied by the Germans and the stern impressment of enlisted men into the "Smersh" sections are brought forth as examples of the pernicious control policies and systems which ensnarl even the post-war Soviet Army.

The military reader, thus, can derive from these two sketches, not only small, routine, but important details about the Russian military, but also corroboration of the belief that the Soviet Army probably continues to place an emphasis on the spy and diversionist as an intelligence collector as well as strict control through secret police as an internal counter-intelligence means.

Reviewed by LtCol Robert W. L. Bross

Ed: The reviewer of this pamphlet was assistant Naval Attache to the USSR in Moscow from 1952 to 1953.

## The Inner War . . .

THE UNSEEN AND SILENT — Members of the Polish Home Army. 350 pages. New York: Sheed & Ward \$4.50

When the mighty Nazi war machine overran Poland in 1939 after a short campaign, every eye was on Germany. Very little was known of the loser, Poland, or what happened in that country during the next few years. *The Unseen and Silent* is a factual account of the courageous Poles and their struggle for freedom. It covers the period from the birth of the Polish Underground in England and the ensuing four years, culminating with the abortive Battle of Warsaw and the unexpected total treachery by the Russian Army and the Polish Communists.

Though the story is told by different men relating their own experiences, the thread of continuity is maintained by good editing.

Highlighting the entire story is the strength and courage of the Polish nation. Even though soundly defeated by the German Army, the Poles never surrendered. A government was formed in Great Britain and a covert parliament, civil administration and regular army organized to continue the fight. Nazi lines of communication, supply depots and military units were continually attacked by *The Unseen and Silent*, the name the partisans gave themselves. The Poles' hatred for their enemy continued with ever-growing intensity as the Nazi brutality continued. Six million is the figure given as the number of Polish nationals who were put to death through the crematorium, concentration camp, gas chamber, torture and the like. Little wonder that they continued their heroic resistance.

Unusual facets of guerrilla warfare are brought to light and keep the action tempo high — bank robbing when the funds get low; a PIO system complete with cameras to photograph the actions and



to publish the story in the clandestine press; seizure by force of a complete area so a partisan killed in battle could have a formal funeral in his home town, are just a few of the book's episodes.

Besides the Nazi, another villainous character is exposed. The revelations of Russian Army conduct and of the complete indoctrination of Polish nationals who were members of the Communist partisan bands must be read completely to be believed. The story of this treachery by the Russian ally should be read by all military personnel.

*The Unseen and Silent* is an excellent book. It is not only an exciting adventure book, but one which will serve as a handbook for guerrilla and partisan warfare. If you like to mix good, high-action reading with valuable professional knowledge—this book is for you.

Reviewed by Capt K. R. Steele

Ed: The reviewer, until recently, was an instructor of guerrilla warfare at the Basic School.

#### Guerrilla Casebook

THE IRREGULARS—GREAT STORIES OF GUERRILLA FIGHTERS: Edited and with Commentaries by Irwin R. Blacker, New York, 1954. Simon and Schuster. \$5.00

The paradox of guerrilla warfare is its ubiquity on the one hand, and the professional soldier's lack of knowledge of its conduct or countering on the other. Throughout the pages of history, guerrilla warfare often has been a factor to be reckoned. During World War II it played a significant part in Allied victories in all theaters. From 1927 to 1949, the Communists waged a guerrilla war against the Nationalists in China which finally resulted in victory for the former.

Based on Russian guerrilla successes against the Germans and victory in the internal Chinese struggle, guerrilla warfare has emerged as an important Communist politico-military technique. Exploitation of this technique recently has won portions of Indochina for the Communists. It continues to threaten other areas in Southeast Asia. We can be certain of its being encountered elsewhere in the future. If World War III should start, or in all-out cold war against Communism, the free na-

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tions are certain to employ their own guerrillas even as they did in World War II.

With guerrilla warfare an ever present phenomenon, it is indeed strange that professional soldiers know and understand so little about it. It was not until some years after World War II that a generally distributed manual on guerrilla warfare appeared. Virtually the only books on the subject are in the nature of the guerrilla's memoirs and are not too well known. We have no schools of guerrilla warfare. Instruction in our service schools on this vital subject is sketchy.

Perhaps this state of affairs stems from the very nature of guerrilla warfare. It is conducted for the most part by non-professionals. Those professionals who do take part usually are the unorthodox soldier types otherwise destined for obscurity in normal military career channels. There are few, if any, laurels to be won in a guerrilla campaign. It is an unknown, unpublicized, extravi-cious war without even the amenities of so-called "civilized" warfare. Quarter is seldom given and often the legal status of combatants is not accorded participants. In short, guerrilla warfare has a distinct negative appeal to most professional soldiers.

Nevertheless, the requirement for a knowledge of guerrilla warfare by Marines exists. If we are to counter the Communist guerrilla forces in the field; if we are to aid and direct successful native guerrilla movements in overrun areas, a working knowledge of guerrilla warfare is essential. Textbooks on the subject are useful but few. As a textbook supplement, a casebook is a recognized educational device bridging the gap between theory and practice. A casebook presents actual situations which point up the principles or techniques to be taught and comments on them in that light. Although not meeting this criterion in the fullest sense, *The Irregulars* still may be regarded as a valuable casebook on guerrilla warfare.

Irwin Blacker has collected 32 accounts of guerrillas in action. They range from Colonial America to World War II and the Arab-Israeli War — from the buccaneer Morgan's capture of Panama and Roger's Rangers to the Commandos, Chet-



niks, Maquis, Chindits, Jedburghs, Long Range Desert Group, Coast-watchers and Haganah.

Also included are guerrilla actions from Napoleon's invasion of Russia, Greece's revolt against Turkey, Mosby's Confederate Rangers, the Apache's war against the U. S. Cavalry, the Caucasian revolt against the Czar, the Boer commandos, Lawrence's Arabs and Mao's Communists.

*The Irregulars* does not comprise a definitive selection, but there is a limit to the number of cases that can be included in one volume. Blacker's stated aim is to present interesting, exciting and honest guerrilla accounts illustrating all phases of guerrilla activity. Within space limitations, the material chosen is well calculated to accomplish this aim. Every last story is a corking good yarn in anybody's book and should satisfy even the most jaded appetites among vicarious warriors. In choosing his cases he does not attempt a strict definition of guerrilla warfare. Instead, he includes accounts of the saboteur, the resistance movement, the reconnaissance agent, guerrilla strategy and politics and regular raiding troops such as Commandos as well as the classic, native guerrilla fighting force in the field. Blacker's comprehensive introduction to guerrilla warfare and his editorial comments, including background briefs, personality material and source notes on each account are a distinct contribution to this anthology.

Irwin Blacker is presently a free lance writer in radio and television and is at work on other books. During the "big" war he served four years in the U. S. Army in various

capacities in Morocco and Italy. After the war he completed his education at Ohio and Western Reserve Universities and taught at Purdue.

Reviewed by LtCol Brooke Nihart

### Indochina Intrigue . . .

THE SWORD OF GOD — Rene Hardy, 319 pages. Garden City, New York: Doubleday and Co., Inc. \$3.95

*The Sword of God*, a timely and exciting novel of individuals entangled in the demoralizing war in Indochina, has achieved popularity as a novel of outstanding importance in France in its original French language edition, translated by Humphrey Hare.

Jean Kerenz, international revolutionist and soldier-of-fortune, seeks to reunite with his brother, the Abbot of the Monastery at Mah-Binh. Kerenz is weary in body and soul of the tumultuous life in which he has found himself and yearns for the inner peace which he feels his long estranged brother may help him to find. Dom Angelico, the Abbot, has meanwhile been taken prisoner by a Viet-Minh task force led by Serkov, the Military Commissioner of the Viet-Minh, a ruthless and self-seeking opportunist.

In pursuing the search for his brother, Kerenz poses as a Communist agent. In this guise he is pitted against Tah, Political Commissar of the 6th Shock Battalion of the Viet-Minh, an Asian with a fanatical hatred of all whites, friend and foe alike. In testing Kerenz's loyalty to the Viet-Minh cause, Tah orders him to execute his own brother, Dom Angelico.

Rene Hardy writes with authority of the intrigues of covert type military operations, drawing on his experience as an active member of the French Resistance during World War II. As an underground agent he helped put into effect a sabotage plan which, in 1944, immobilized nine enemy divisions and prevented them from putting in a scheduled appearance at the Normandy beach-head. This is Hardy's first novel and he displays an amazing talent for superimposing an unusual group of fictional characters upon the skeleton of history. The rapid pace of the story, combined with realistic character studies, holds the interest of the reader to the very last page.

Reviewed by Major R. M. Head

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# SQUADS RIGHT

Look sharp—be sharp! Know your stuff on the drill field

RESPONSE TO THE TWO-PAGE article *Squads Right!* (August, 1954) has been such that the GAZETTE has decided to present a series of illustrated articles covering basic movements of the pre-1939 ceremonial drill now being inaugurated at Marine Corps posts and stations and non-FMF units.

Here is the first of the group. Although some of the movements presented in this issue appeared in the August GAZETTE, it was felt that they should be repeated in sequence so that subscribers, starting with this month, would have an opportunity to save the complete set.

Pages on which the articles will appear may be clipped along the dotted line and bound together forming a loose-leaf drill manual.

The series will run for six months and will cover movements of troops and the positions of NCOs and officers up to, and including, company drill formations.

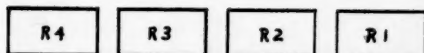
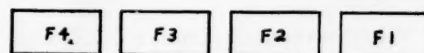
To start off, let's have the composition of the squad. It is made up of eight men and is formed in two ranks. The squad leader, usually a corporal, occupies the number four position in the front rank, numbering from the squad's right to left. The squad is formed at close interval with 40 inches' distance separating the front and rear ranks.

Now for the first movement—in the text, preparatory commands will be italicized and commands of execution will be capitalized.

TO TURN ON A FIXED PIVOT the command is: 1. *Squad right (left)* 2. MARCH.

At the command MARCH, the right-flank man in the front rank faces to the right in marching and marks time. The other front-rank men oblique to the right, place themselves abreast of the pivot man and mark time. In the rear rank, the third man from the right marches straight to the front three steps and

one half-step, then faces to the right in marching and marks time. The second and first men from the right oblique to the left, then oblique to the right so as to place themselves in column, in the order named, behind the third man. On the fifth count, all face to the right in marching and cover their file leaders. The other member of the rear rank marches straight to the front four full steps, obliques to the right, and by a second oblique to the right, places himself abreast of the men on his right and covers his file leader. On the eleventh count both ranks execute "Forward March" without command.



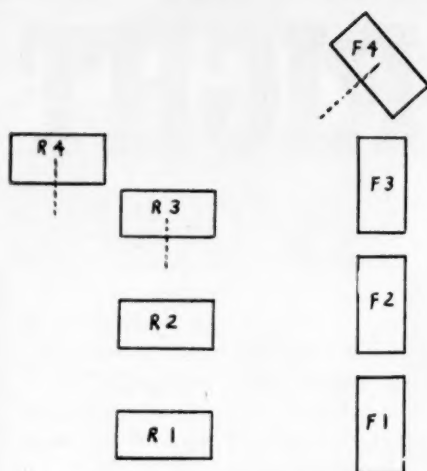
Formation of the squad

When executed while in march: If the turn about is to the right, the command of execution is given as the right foot strikes the ground; if to the left, as the left foot strikes the ground. The count begins on the second step after the command of execution, the beat between the command and the first count being designated as "Step." The execution of the evolution does not commence until the first count "One," the intervening step being a full step to the front by all members of the squad. If the turn about is to the right, the count "One" will fall on the right foot and the count eleven also on the right foot. The entire squad steps off in the new direction on the eleventh count. If the turn about is to the left, the step off in the new direction is on the eleventh count with the left foot.

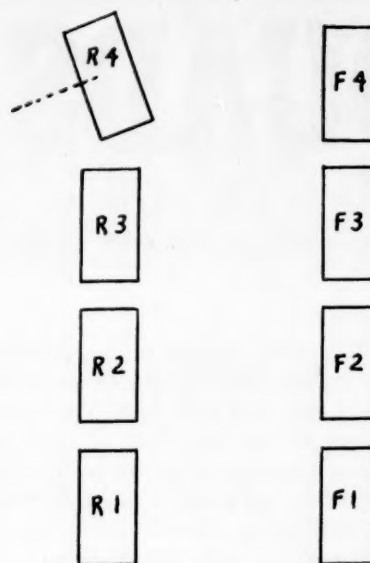
TO TURN ABOUT on a fixed pivot and march, the command is: 1. *Squad Right (left) about*, 2. MARCH. At the command MARCH the front rank executes "Squad Right." On the fifth count, the front rank executes a second "Squad Right." In the rear rank, the third man from the right marches straight to the front three steps and one half step, changes direction to the right, and takes three steps and one half step in the new direction. The second and first men from the right, oblique to the left and then oblique to the right so as to follow the third man, in column as in "Squad right." On the ninth count, all three men face to the right in marching, cover their file leader and mark time. The other number of the rear rank marches straight to the front four steps, obliques to the right one step, completes the change of direction to the right, marches four steps in the new direction, obliques to the right, places himself abreast of the men on his right and covers his file leader. On the eleventh count both ranks execute "Forward March" without command.

When executed from a halt, the entire squad steps off with the left foot, the count beginning on the beat next following the command of execution. The eleventh count, on which the entire squad steps off in the new direction, therefore, requires a full step with the left foot whether the about turn is to the right or to the left.

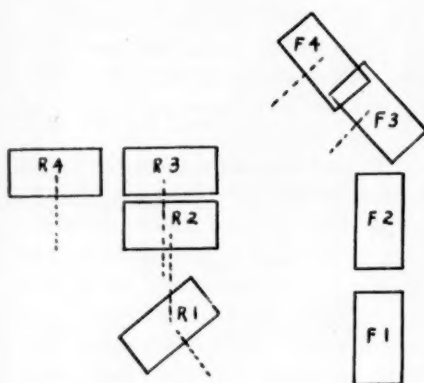
TO TURN ON A MOVING PIVOT, the command is 1. *Right (left) turn*, 2. MARCH. The movement is executed by each rank successively and on the same ground. At the command MARCH, the pivot man of the front rank faces to the right (left) in marching, takes one full step and then takes eight half steps. The other men oblique to the right (left) until opposite their places in line,



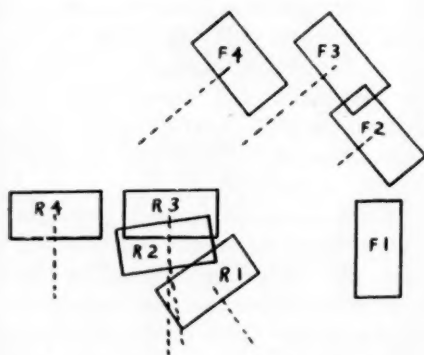
**Squads Right: count "Four"**



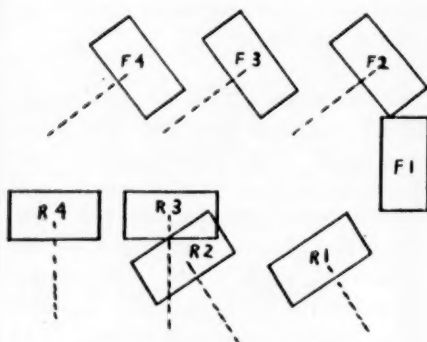
**Squads Right: count "Five"**



**Squads Right: count "Three"**



**Squads Right: count "Two"**



**Squads Right: count "One"**

then execute a second right oblique, and take up the half step when coming abreast of the pivot man. The marching flank arrives abreast of the pivot man when the latter has taken eight half steps. On the tenth count all take the full step without command.

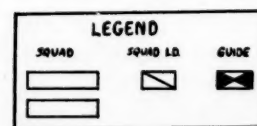
When executed from a halt, the count begins on the beat next following the command of execution, and the evolution is begun with the left foot. The tenth count, on which the leading rank steps off at a full step in the new direction, therefore, requires a step with the right foot.

When executed while in march, the count begins on the second step after the command of execution, the beat between the command and the count "One" being designated as "step." This beat requires a full step to the front by all members of the rank. If the turn is to the right, the command of execution is given as the right foot strikes the ground, and the step forward is therefore on the left foot. The count of "One," on which the evolution commences, falls on the right foot and the tenth count, on which all members of the rank step off in the new direction, is with the left foot. If the turn is to the left, the tenth count is with the right foot.

☛ To form line on right or on left (the platoon being in column of squads) the command is: 1. *On right (left) into line*, 2. MARCH, 3. Platoon, 4. HALT, 5. FRONT.

At the command *On right into line*, the leader of the leading squad commands *Right Turn*. The leaders of squads in the rear command *Forward*, if the movement is executed from the halt, or *Continue the march*, if the movement is being executed while marching. At the command MARCH, the leading squad turns to the right on a moving pivot. The command HALT is given when the leading squad has marched the desired distance in the new direction. It halts. Its leader then commands: 1. *Right*, 2. DRESS. The squads in rear continue to march straight to the front. Each executes "Right turn" at the command of its leader when opposite the right of its place in line. Each is halted on the line at the command of its leader, who then commands: 1. *Right*, 2. DRESS. The squads in the rear continue to march straight to the front. Each executes "Right turn" at the command of its leader when opposite the right of its place in line. Each is halted on the line at the command of its leader who then commands: 1. *Right*, 2. DRESS. All dress on first squad in line. The dress is held by all squads until such time as the platoon leader lines up the platoon and commands FRONT.

If the movement is executed in double time the leading squad marches in double time until it is halted. US MC



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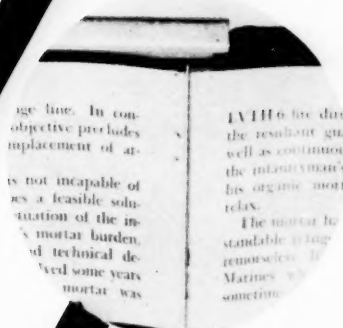
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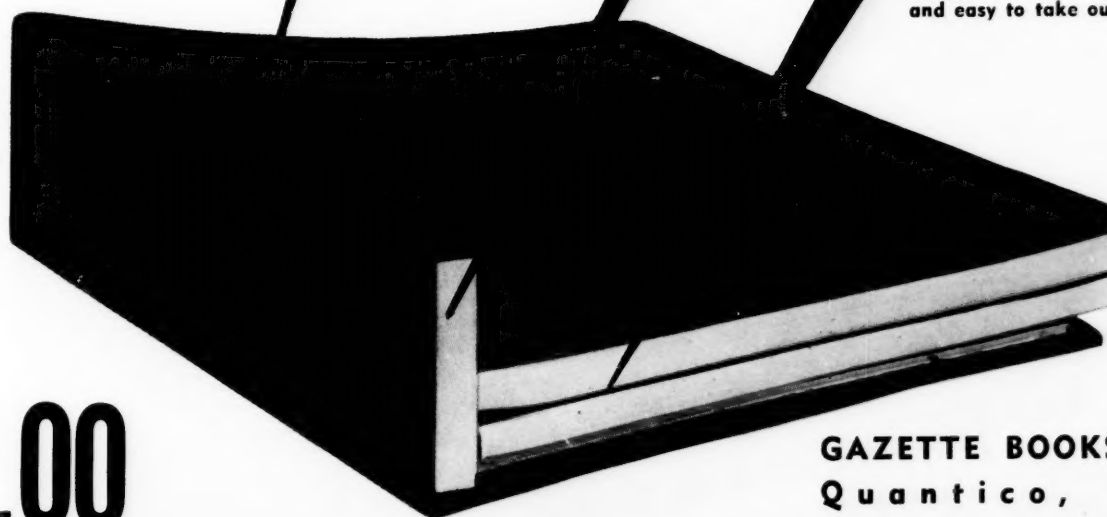
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